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ARCHEOLOGIC INVESTIGATIONS

IN

JAMES AND POTOMAC VALLEYS

BY

GERARD FOWKE



WASHINGTON

GOVERNMENT PRINTING OFFICE

1894



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INTRODUCTORY NOTE

BY WILLIAM H. HOLMES

In 1889 the Bureau of Ethnology began systematic archeologic explorations on the Atlantic slope of the United States, the initial work being in the tidewater territory of Maryland and Virginia. While this work was in progress it became apparent that a clear understanding of the culture phenomena of this province required an examination of the Piedmont-Appalachian highland of Virginia, Maryland, and West Virginia. Accordingly, Mr Gerard Fowke, formerly associated with Dr Cyrus Thomas in the exploration of the great mound region of the Mississippi valley, was directed to take up the survey of this section. Early in May, 1891, I joined Mr Fowke in a study of the lower valley of James river, the purpose being to give him a reasonable degree of familiarity with tidewater archeology before entering the highland.

The summers of 1891 and 1892 (and until the summer of 1893) were devoted by Mr Fowke mainly to James, Shenandoah, and neighboring valleys, and the accompanying report embodies the principal results of his work. His explorations included all the territory within 5 miles of the James, on each side, from Cape Henry almost to the head of its ultimate tributaries; both sides of the Potomac from the mouth of the Monocacy to Cumberland; the entire area of every county drained by the Shenandoah and the South branch of the Potomac; all of Orange county, with portions of the adjoining counties, and several counties along the Appomattox and upper Roanoke. The report on the latter region, as also that of the tidewater country, is reserved for another paper. A brief sketch of particularly interesting features of the investigation was published in the *American Anthropologist* for January, 1893.

Mr Fowke was instructed to seek means of identifying the tribes formerly occupying the region and of demonstrating their relations to the tidewater peoples on the one hand and to the inhabitants of Ohio valley on the other.

The results, though sufficiently definite on a number of points, fail to furnish satisfactory knowledge of the nationality of the former occupants. It is clear, however, that the people, even if not of the same stocks as those associated historically with the region, did not differ

greatly from them in habits, customs, or other features of culture, and the occupancy was confined apparently to a single period ending with the final expulsion of the red man 140 years ago.

There is no evidence of long-continued occupancy of any section or site and the art remains do not appear to represent any localized culture development. On the west the art forms affiliate with those of Ohio valley and on the east with those of the tidewater country. On the north there are traces of Iroquoian influence and on the south a gradation into the southern Appalachian phases of art is shown. There is absolutely nothing in the archeologic evidence that is not sufficiently accounted for on the assumption that the highland districts of Maryland and the Virginias were overrun and at times occupied by the historic tribes associated with the general region.

ARCHEOLOGIC INVESTIGATIONS IN JAMES AND POTOMAC VALLEYS

BY GERARD FOWKE

INTRODUCTORY.

In the following paper are given the results of a careful examination of the area drained by James and Potomac rivers, in Maryland, Virginia, and West Virginia. Constant inquiry and diligent search were made at every point for aboriginal remains of any character. No reference is made herein to scores of places at which such remains were reported to exist, but which failed to reveal anything falling within the scope of the work; only those localities are mentioned in which definite discoveries were made.

Along the James and Potomac probably exist many village sites and cemeteries covered by a thickness of soil that has hitherto concealed them; these will gradually be disclosed through excavations, freshets, and other agencies, for the benefit of future explorers.

From various causes a few mounds and other indications of aboriginal occupancy, which have been reported, could not be visited, but from the descriptions given there is no reason to believe that an examination of them would materially modify the conclusions derived from a study of those here treated.

THE JAMES AND ITS TRIBUTARIES.

POWHEATAN COUNTY.

At the first settlement of Virginia in 1607, James river, between tidewater and the Blue ridge, was claimed by the Monacan, known later as the Tuskarora.¹ They removed soon after to North Carolina, where they lived until 1712, when they migrated northward and were incorporated with the New York Indians as the Sixth Nation.

In 1608 an expedition ascended the river 40 miles above the falls, discovering 2 villages—Mowhemenchouch (or Mohemanco) and Mas-

¹ Jefferson, Thomas, Notes on Virginia, p. 156. John Haywood (Nat. & Abor. Hist. of Tennessee) says that in 1730 a part of the Iroquois were at the foot of the mountains between Tennessee and North Carolina, the king's town less than a day's journey from the foot of the mountains. He also identifies them with the Monacan.

sinacak;¹ the former, the outpost or most easterly settlement of the Monacan, was 17 miles above the falls at Richmond, on the southern side of the river, near Huguenot springs. The old name of the town, though in a modified form, is retained by the railway station of Manakin, opposite that point. The only evidences now remaining are the flint chippings, which are abundant; all else that may have existed has been destroyed by more than two centuries of constant cultivation. On the northern side of the river a great many arrowpoints and spearheads are to be found; and on the bottom lands many chips and unfinished implements occur. Nearly all these are made of quartz or quartzite, though there are some pieces of worked flint among them. It is possible that in the lowlands, subject to overflow, the silt deposited by floods has covered from sight many temporary camping places. At Boscobel, 4 miles above the old village, a ledge of rock crosses the river, forming a natural dam, with long pools of deep water above and below, which are noted fishing places; arrowheads and pottery fragments are abundant in the vicinity. Near the dam a steatite pipe and some fragments of pottery were found about 30 inches below the surface, one piece of the pottery having the impression of a net or web on the inside; no bones were with or near these specimens.

The farm of Dr Blair Burwell, 2 miles north of Tobaccoville, has been known for two centuries as "Indian camp," from a supposed aboriginal settlement. Various depressions were long pointed out as places where the Indians had dug holes in which to keep warm. Some of these, judging from the description, may have been hut-rings or sites for lodges; but most of them seemed to be more like trenches, extending sometimes nearly or quite 100 yards and being from 20 to 40 feet in width. They resembled gullies or shallow ravines, except that they had no outlet in any direction, the ends terminating abruptly. All these depressions have been obliterated by cultivation. A great number of arrowpoints and spearheads, with a few fragments of rough pottery, have been found in the adjacent fields. It is not impossible that this is the site of the Massinacak of Smith, although he leaves the exact locality in doubt.

AMELIA COUNTY.

There is an extensive steatite quarry on the farm of John B. Wiggins, 3½ miles east of Amelia court-house. It has been thoroughly explored by Mr F. H. Cushing.

Several mica mines have been opened within a mile of the court-house. The miners report that in digging they sometimes discover small piles of mica which have been detached from the rock and heaped together. These pieces, usually of poor quality, as if rejected by the workers, are doubtless from the aboriginal excavations, as they lie

¹ Smith, John, *History of Virginia*, London, 1629, (reprint Richmond, 1819), vol. 1, p. 196.

beneath several feet of accumulated earth, and there is no tradition of early mica mining in this section by the whites.

GOOCHLAND COUNTY.

ELK ISLAND.

The upper end of Elk island is $2\frac{1}{2}$ miles below Columbia; the lower end 7 miles farther down. The widest part, which is a mile across, is a little more than 2 miles from the upper point, and the island contains about 1,200 acres of very fertile soil. The southern branch or channel of the river is much wider than the northern branch. The entire island was submerged in 1870, and a large part of it is flooded every year, though much remains bare except in the highest freshets. It is gradually increasing in size; a thick growth of maples along the water's edge breaks the current from the banks and favors the accumulation of sediment, which forms lower terraces and has covered with many feet of mud any remains which may have been exposed by caving in of the banks before timber began to grow. The same cause is raising the general level; within the last fifty years 8 or 10 feet of soil have been deposited on the lower portions.

There are very few gullies or bare spots along the banks; but at nearly every place along both sides, for more than 2 miles from the head, at which the ground could be examined at all, the usual indications of Indian occupancy are visible. When the ground on ridges is plowed the same indications may be seen. Skeletons have been found in three places—on the southern side of the island, near the ferry landing; on the northern side, just opposite the first, at some distance from the bank; and on the edge of the bank nearly a mile below the latter. At the last an extensive washout had taken place, and many bones were afterward found in the bank, as well as lying at the base where they had fallen. This bank has been sloped down and trees cut to cover it, and bushes and weeds allowed to grow thickly over it, so that nothing can now be seen. No excavations can be made, as a very small hole might give the river a start, during floods, that would cause the loss of many acres. The second burial place mentioned was discovered by plowing several inches deeper than usual. Many bones were unearthed, but as the ground has since filled 5 or 6 feet through the agency of freshets, explorations are impracticable.

Smith¹ says the chief habitation of the Monacan was at Rasauweak; on his map this settlement is shown on the point within the two branches of the river. Jefferson,² also, says their principal town was at the forks of the James.³ But the point of land between the two rivers is irregular, infertile, rather difficult of access, and nothing is found to

¹History of Virginia, op. cit., vol. I, p. 134.

²Table of Indian tribes in Virginia, in his Notes, op. cit.

³That portion of the James above the mouth of the Rivanna was formerly called the Fluvanna.

show that it was ever occupied by Indians. On the other hand, the island is well protected from assault, the soil is all alluvium, the ridge along each side at the upper end is fully as high as any of the bottom land on either side of the river, and many specimens of steatite pottery, some rough, others tolerably well finished, have been found on the island, whereas such are extremely rare elsewhere in the vicinity. The villages near here, to be mentioned presently, may have been permanent, or only temporary, but their sites were in no way preferable, being either surrounded or submerged in every considerable freshet. Altogether it is very probable that the main town of the Monacan was on Elk island.

CALEDONIA.

A steatite quarry showing Indian work may be found a mile from the village of Caledonia, which is about 6 miles from Columbia. It has been examined by Mr Cushing.

CUMBERLAND COUNTY.

MAYO FARM.

On the farm of Dr Edward Mayo, opposite Columbia, the bottom is about 300 yards in width, and like nearly all the bottom land in the vicinity is highest near the river. In 1870 this ridge was greatly eroded, and many skeletons were visible after the water had subsided. No trace of them now remains, and the ground is so torn into depressions and heaped into minor ridges by that and later floods, and so disturbed by cultivation, that it is impossible to determine, otherwise than by carrying along a series of trenches, where any burials have been made. That it was a village site is sufficiently proven by the great quantities of broken and burned stones, quartz chips and spalls, and broken pottery, both of clay and steatite, scattered about on the surface.

HOOPER ROCK.

On the south side of the river, 2 miles below Columbia, is a ledge or cliff, known as Hooper rock. It contains a vein or stratum of steatite which does not, however, seem to have been worked. In the woods, somewhat less than a mile back of this, is an aboriginal quarry, where many broken or unfinished vessels have been found. It is covered with such a dense growth of small trees, underbrush, and vines, that an examination is impossible until the ground is cleared.

FLUVANNA COUNTY.

The only aboriginal remains examined in detail in Fluvanna county were those found in the vicinity of Columbia.

Columbia is situated at the mouth of the Rivanna, on the lower or left bank. On the point opposite, between the Rivanna and James, the

hill land extends almost to the junction of the two streams, and the narrow lowlands are subject to overflow.

Three miles above Columbia, on the farm of Major Allen Galt, was a large area along the river bank, several feet higher than the ground near the hill, and so sandy as not to be worth cultivating. This sand bank may have been due to the great flood of 1776, at which time much sediment was deposited in the river bottoms, but it had never been entirely covered by water since the whites occupied the country until the freshet of 1870. When the water receded it was found that fully 4 feet of the surface had been removed, revealing not less than 40 or 50 "fireplaces" scattered at intervals, generally 30 to 40 feet apart. Lying among the ashes and burned earth, or scattered close about, were many burned stones, fragments of pottery, animal bones, mostly broken, some of them calcined, arrowheads, great quantities of chips and broken arrows, and other indications of a former Indian town. Most of the arrowheads were of quartz, a few being of flint or crystal. The remains were abundant, but nearly all were carried away by local collectors. No steatite pottery was found, nor any earthenware with handles.

Scattered between the fire beds were the graves, readily distinguished by the darker color of the earth. They were circular, or nearly so, about 3 feet in diameter, and none of them more than 18 or 20 inches deep. One contained the skeletons of a woman and a child, one of a man and a woman, a few those of two women, but most of them disclosed the remains of only one individual in each.

The fire beds were 6 or 8 inches thick, and several feet in diameter. If the fires were made in huts or wigwams, the latter were far enough apart to allow considerable space around each one, the burials being made in the open spaces between. More than 25 graves were carefully examined, but no relics were found in any of them; if anything had been buried with the bodies, it was of a perishable nature. In most of them the bones crumbled upon exposure; only one skull was taken out intact. Human bones were found nearly half a mile below the cemetery later in the season; but there was nothing about them to indicate that the place in which they were found was originally a burial ground, or even that the bones were near their original position; they may have been washed there.

The area denuded by the freshet extended far beyond the limits of the village site; in fact the whole bottom was bared to a greater or lesser extent. Since this occurrence the ground has been inundated three or four times; this, with constant cultivation, has destroyed all semblance of definite order or arrangement. A great amount of burned stones, human and animal bones, quartz chips, spalls, and unfinished pieces, and numerous fragments of pottery are strewn in confusion over the surface.

Dr Gay, who assisted in these investigations, describes the skulls as being flat at the occiput and having high or pointed parietals, the

sides sloping like the roof of a house. There is no record or tradition of an aboriginal settlement here, unless it be the "chief town of the Monacans," referred to in Jefferson's Notes and Smith's History; and as stated above, the evidence is in favor of that settlement having been situated on Elk island.

On a lofty hill near Dr Gay's residence, 5 miles northwest of Columbia, a great many arrowheads and a few celts or hatchets have been found. It seems to have been a workshop, as chips, etc., are very abundant; but no traces of fire beds, pottery, burned stones, or other evidences of former domiciliary occupancy have ever been discovered.

In the first bottom below Columbia the surface near the river bank is several feet higher than toward the hill. The elevation is about half a mile long, with an average width of 50 feet. Pottery fragments, burned stones, implements of quartzite or flint, mostly rude or unfinished, and chippings, occur sparsely. Some finely-worked arrowheads or knives have been found, as well as 2 drills and a leaf-shape implement of yellow jasper 3 inches long.

Three skeletons have been exhumed at this place; it is learned that they were buried 8 or 10 feet apart, extended, and about 30 inches below the present surface. Nothing apparently had been interred with the bodies.

BUCKINGHAM COUNTY.

Three miles below Scottsville, on James river, were several so-called "Indian pottery kilns." Burned stones were arranged in small circles, on and about which were many large pieces of pottery, some with legs, others with handles. On one piece, consisting of half a pot of about 2 quarts capacity, were a handle and 2 legs. It was probably the fireplace of a party that camped on the river bank.

NELSON COUNTY.

TRAILS AND HABITATIONS.

The Indian trail from the Shenandoah valley, through Rockfish gap, crossed James river at an island near Norwood. For 5 miles below the river there is a succession of pools and rapids, with many large rocks in the channel which are covered only in time of high water. The hills on the south with scarcely an exception reach to the water, there being only a few narrow strips of level ground. On the north the bottom lands are wide and continuous.

The only indications of Indian occupancy on the southern side in this vicinity are opposite the island. On the northern side, however, aboriginal remains may be found on every farm. They are most abundant on the lands of Mr Alexander Brown and Mr Russell Robinson, 3 miles below Norwood.

The floods of 1870 and 1877 disclosed numerous small deposits, probably more than 200 in all, containing burned stones, pieces of pottery,

arrowheads, and great quantities of quartz chips. They are in nearly straight rows, from 25 to 50 feet apart, and extend for several hundred yards along the river. There was close similarity in the piles; they varied in size, but on an average each contained half a bushel of burned stones, a double handful of clay or steatite pottery fragments, 3 or 4 well-made arrowheads, a dozen rough or unfinished ones, and probably a quart of chips and broken points—nearly all of quartz, a few being of quartzite, flint, or argillite. Spearheads are rare; most of the arrows and knives are small. Although the pieces of pottery are numerous, none show any trace of legs or handles. A number of side-notched axes, hoes, adze-like celts for hide dressing or for working steatite, and an unfinished steatite pipe were found. All these things point to a village of considerable size, but a most careful search of the whole area, especially along the river bank and in the numerous gullies, failed to reveal a bone of any description.

Similar sites exist opposite Greenway and near Gladstone; arrowheads and pottery are found, but no bones.

STEATITE QUARRY.

Four miles from Norwood, beginning about 100 yards above where the "Tye river road" crosses Cedar creek, is a very large ledge of steatite. It gradually becomes more siliceous toward either side until it merges into the sandstone. Boulders, some of them as large as a freight car, project above the surface; slabs 10 feet or more in length have been quarried. The outcrop extends more than half a mile, the creek cutting across it and making a considerable ravine. There are observable several slight depressions where it is possible work has been done by the Indians, but every place is so covered with leaves and litter and so overgrown with brush and vines that it would be necessary to clear the ground thoroughly in order to determine whether or not these depressions are of Indian origin. Pieces of steatite from 2 to 50 pounds in weight cover the surface; very few of them show indications of having been worked, and they may be only blocks broken from projecting points.¹

ROCKBRIDGE COUNTY.

The Indian trail from Shenandoah valley to southern Virginia, which crossed the James at this point, passed over the mountains through a depression about a mile above. In this gap a small pile of stones was examined a few years ago, but no remains of any sort were discovered. Such mounds frequently occur at the highest points on a trail; they seem to have served as guide marks or for a kindred purpose.

¹ The hills beginning just above Norwood and continuing to the Blue ridge were formerly known as the "Broken country," and emigration, which early reached to their eastern border, advanced no farther for more than fifty years, or until the Indians finally abandoned that region as a hunting and fishing resort.

Tradition says an Indian town was situated on the right bank of North river, opposite the gap; but very few relics, except some chips of quartzite, and none of the usual indications of a village site, have ever been found in the bottoms. A mound of peculiar form near by, which locally has been supposed to cover the remains of the ancient inhabitants, is of natural formation.

The Indians abandoned this region soon after the battle of Point Pleasant; none ever returned, except a few small hunting parties, who never tarried in the vicinity more than a few days.

On the farm of Jacob Horn, near the junction of Hayes and Walker creeks, 2 miles north of Rockbridge baths, is a mound that has been partially excavated several times by various parties, and many skeletons and relics have been taken out. The top of the mound is white with fragments of human bones that have been thrown out or exposed by plowing. The owner refuses to allow further excavation.

At the summit of a pass through North mountain, between Lexington and Rockbridge Alum, are several stone piles, none of them more than 2 or 3 feet high. They are commonly supposed to be Indian graves, but are probably only trail marks similar to those previously described, as a trail formerly passed through here.

A mile south of Goshen, at the Victoria iron furnace, a dozen or more skeletons were disclosed, all extended on the back. There was nothing to indicate whether they were the remains of whites or Indians.

Near the same place, in making a road, the skeletons of a man and boy were found 4 feet beneath the surface; the skull of the latter had been pierced by a bullet.

A mile north of Goshen, on the Big Calfpasture, one skeleton was found in the river bottom. The finder described it as "sitting up," meaning, probably, that it was doubled and lying on the side. No relics were with it, and no other skeletons have ever been found there.

Four miles below Goshen the Big Calfpasture and the Little Calfpasture unite, forming North river. Half a mile from their junction, equidistant from either, on a plateau from 40 to 60 feet above the low bottom, on the estate of Mr Bell, are two mounds, both of which have been opened. Before being disturbed the first was about 4 feet high and 30 feet in diameter; from it were taken, according to the description furnished, "a lot of arrowheads, some mica, 2 or 3 pipes, some copper in small squares as thick as a quarter of a dollar, and a good many beads, some looking like bone, others resembling amber." The other mound is 2 feet high and 40 feet in diameter, and neither human nor art remains were found in it.

BOTETOURT COUNTY.

BUCHANAN.

Opposite the upper end of the town of Buchanan, where the bank had caved down and the loose soil had washed away, there was a large

mass of burned stone, in and close around which were fragments of pottery, arrowheads, a celt, a rough or unfinished ax, several worked stones which were evidently intended for celts or axes, and many chips of quartz, quartzite, flint, and chalcedony. These apparently marked the site of a single firebed.

GALA.

At this place two creeks, whose courses across the bottom land are nearly parallel, flow into the James within 300 yards of each other. Most of the land between the creeks is about 20 feet higher than the bottom lands above or below them, or on the opposite side of the river, and is terminated at the river by a cliff of shale, the remnant of an ancient island. The river at this point flows almost due south, making an abrupt turn westward just below. Opposite the bluff, and for half a mile farther up, the river is from 10 to 20 feet in depth. Before dams were built, shad were caught in great quantities; bass are abundant now. The rugged mountains (Rich Patch has for miles an elevation of 2,000 to 2,700 feet above the river) still harbor many deer, and bear are frequently seen, while smaller game is abundant. The low lands yield from 60 to 90 bushels of corn to the acre. The water of the creeks, being from mountain springs, is very clear and cold, and is used by many in preference to well water. It is an ideal place for an Indian settlement.

In making a railway cut between the creeks, about 200 skeletons were taken out, with many of which were pottery, pipes, beads, and other articles. Remains of the same character have been exhumed from postholes, cellars, and other excavations in the vicinity.

For various reasons careful examination was possible on only one side of the railway, along a strip 180 feet in length, with an average breadth of 20 feet.

A firm subsoil of yellow clay underlies a loose, porous soil, almost black in color; at the northern end of the area dug over it is from 2 to 3 feet deep, but soon decreases to a thickness of 18 to 30 inches for about 80 feet, then gradually becomes thinner until within 30 feet of the other end, where it is not more than 6 inches deep. This difference is due to surface erosion; the clay holds practically the same level.

Scattered throughout the black earth, from the surface to the underlying clay, were thousands of pottery fragments; mortar stones; celts; grooved axes; mullers; clay pipes; fragments of steatite pipes with flat stems; arrowpoints, mostly triangular; flint scrapers; drills; bone beads; awls, needles, or perforators, made of the leg bones of deer, wild turkey, and other animals and fowls, as well as from other bones broken and dressed; quantities of periwinkle shells, probably used for food; many having the points broken off; bones of various animals, birds, and fishes, showing evidence of having been burned or boiled, or occurring in their natural state; charred corn on the cob or

shelled; long, slender bones, partly cut in two at different points, intended to be made into beads; bone fishhooks; mussel shells; smooth pebbles, which may have been used as pottery polishers; charcoal; burned stones; flint chips and spalls in great quantities. No effort was made to keep an exact record of all these things; they were found at random, sometimes sparsely, sometimes abundantly, but always as if lost or thrown aside.

There can be no doubt that all this loose black deposit is due to the gradual accumulation of such refuse as is always characteristic of an Indian village. There is no other way of accounting for the distribution of the numerous articles found in it.

Scores of pits of different depths were found, some extending only a few inches into the clay, others with a depth of 4 feet or more. They were filled with earth like that in the stratum above, mingled with ashes, charcoal, burned stone, broken bones (charred and boiled), fragments of pottery, and implements, such as occur in similar pits elsewhere. They were evidently intended only for culinary purposes. To save wood, or to avoid the discomfort arising from proximity to a large fire, a hole was dug, a fire made in it, and wood enough heaped on to make a thick bed of coals when it had burned down. Then the food was placed within and the hole carefully covered and left undisturbed until the cooking was completed. No order or arrangement was apparent in the contents of these fire pits, nor were they at all uniform in size. It is singular that so many should exist within a limited space, as it would be much easier to clean the loose material out of one in use than to dig another in the tough clay.

Some of the skeletons were close to the surface, others in the black earth at various distances above its bottom line; most of them, however, were in shallow graves that extended from 8 to 15 inches into the clay.

Work was commenced at the northern end of the section examined. During the first day 3 barbecue holes were found. The first was very irregular in outline, from 6 to 7 feet across and extending only a few inches into the clay. A portion had been removed by the railway excavation. There was nothing in it except some fragments of the skull of a very young child.

The second hole,¹ 3½ feet across, was also shallow, being only about 30 inches deep. It contained a bone needle 8 inches long, and 2 or 3 unworked bones of the same kind lying together, a flat bone piercer, and the carved object shown in figure 1. All these were scattered in the earth above the bottom of the hole.²

¹ Although the word "barbecue" is omitted, it may be assumed that all holes mentioned were designed for roasting large animals whole.

² Unless otherwise specified the objects mentioned as having been found in these holes were not on the bottom, nor apparently placed with any intention of hiding or concealing them, but were in such position as to indicate that they were carelessly thrown in at any time. When found in graves the case is different.

On the second day 4 holes were found, one $4\frac{1}{2}$ feet deep, the others shallow, all about $3\frac{1}{2}$ feet in diameter. Two celts were found in the larger hole and two in one of the others.

The third hole opened was somewhat different in form from any other. It had been dug to a depth of $5\frac{1}{2}$ feet, with a diameter of 4 feet. The bottom was covered with a layer of clean ashes one-fourth of an inch thick; resting on these were several pieces of a pot which, when entire, would have contained between 2 and 3 gallons, and a bone partly divided at several points for making beads. The hole was circular for 2 feet above the bottom. It then extended 6 feet toward one side, making the upper portion 10 feet long and 4 feet across, the entire bottom being as smooth and level as a board floor. It contained much pottery, bone, and rock, all burned and broken into small fragments.

On the third day 4 holes were opened, 3 of them small and shallow. In one was a polished bone fishhook. The largest was 4 feet deep. Just eastward from it, with 4 inches of clay separating them, was a grave, the bottom of which was 3 feet from the surface. The skeleton was compactly folded and lay on the left side, with the skull toward the north. The bones rested against the hard clay on every side, as if the body had been forcibly pushed down. A large deer-bone perforator lay near the chest. Not a single bone of the right hand or wrist could be found, though nearly all the bones of the other hand were well preserved.

On the fourth day 2 shallow holes and a large bed of ashes lying a few inches above the clay were examined. On the fifth day a similar ash bed; and on the sixth day 7 holes, none of them deep, and a large ash bed, were unearthed.

On the seventh day one deep and 3 shallow holes were found, with the usual contents—pottery, bones, and stones burned and broken.

A bone fishhook was in one of the holes. One grave was found which contained a doubled skeleton lying on the left side, with head toward the east. The remains rested on the clay, which had not been disturbed in burying the body. Three celts were lying together at the waist; 4 bone needles were also found in the earth about it. A bone tube, dressed at both ends, lay by one femur. The bones were much decayed and broken.

On the eighth day 4 holes, 3 to $3\frac{1}{2}$ feet deep,¹ were examined, in one of which portions of a bear skull were found. About a foot below the

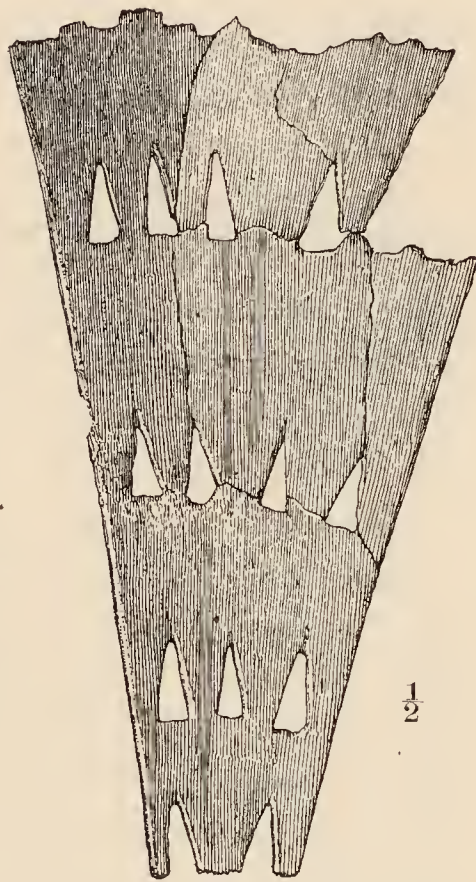


FIG. 1.—Carved bone from Gala, Botetourt county, Virginia.

¹ Most of the holes were 3 to $3\frac{1}{2}$ feet in diameter. This measure is implied when no other is given.

surface, loose in the earth, was found a charred ear of corn, and a foot away a quantity of shelled corn.

Ninth day; 3 shallow holes and 2 from 4 to 4½ feet deep were found, in one of which was a bear skull. Two graves also were found, about 3 feet apart. Both skeletons were folded, rested on right side, with head toward the east. The femur of one was 16 inches long; the bones were very soft. Nothing was buried with it. The skull of the other was small, rather long and narrow and broken transversely across the top in a way that could scarcely result from the pressure of the earth. The fracture seemed due to a blow, but the inner plate was not depressed or shattered, the fracture extending through the bone in a sharp, well defined line. All the molars were gone from the lower jaw and the sockets entirely closed. The femur measured 17½ inches in length.

On the tenth day 2 holes were found, one 6 feet deep and 4 feet across, containing an arrowhead and a needle, the other 4 feet in depth and the same in diameter, with a large amount of ashes and charcoal, many animal bones, the entire skeleton of a small wolf, and about 40 burned stones ranging from 2 to 50 pounds in weight, besides scores of smaller ones.

The first skeleton found, that of a child about 4 years of age, was doubled, and lay on the right side. It rested on the clay at a depth of 18 inches, and nearly 150 periwinkle and *Marginella* shells accompanied it. The next skeleton, about 2 feet east of the first, was that of an adult, lying in the same position, with the head southward. It was 3 feet under the surface. A bear tusk lay 3 or 4 inches north of the sacrum, and a bone and a shell bead lay near the head.

Just east of the child's skeleton was that of a woman who had evidently died in childbirth. In the pelvic cavity were found an infant's bones fully as large as some of those separately buried. The body was extended on the back, with head toward the east. The skull lay with the vertex up, the face turned southward, the displacement being doubtless caused by settling of the earth. The legs were drawn up until the feet were near the hips. The knees were a little north and the feet a little south of the line of the spine; they may have been placed thus or may have assumed the position after burial. Around the neck were more than a hundred small, slender, tubular shell beads, some stuck together end to end. Above the feet, with 8 inches of earth intervening, was a cobblestone about 40 pounds in weight.

A foot south of the head of this skeleton, in the same grave, was a small part of the upper jawbone of another individual. No other human bones were found with it; but as it lay at the edge of the railway cut, it is possible the remainder of the skeleton had been previously dug out and the earth had fallen over this portion.

Near the second skeleton, and a little south of a line from it to the child's skeleton, was a single lower jaw, sound and nearly perfect, though many of the teeth had fallen out. Some fragments of the

bones of a quadruped were found near it, but no other trace of human bones were seen.

The skeleton of a very young infant also was found; the crowns of the teeth had not yet reached the surface of the bone. About 20 *Marginella* shells and a number of periwinkles were with it. The body was folded, rested on the right side, with head toward the east. A boulder about 30 pounds in weight lay above its feet, with 10 inches of earth between.

The first skeleton found on the eleventh day was lying in the smallest space possible; the grave, dug a foot into the clay, could barely contain it. The body lay on the right side, with head toward the east; the back nearly in a straight line, not bent toward the knees, as in most of the skeletons exhumed. The fibulae and tibiae were all in contact, though the heels were not drawn up against the pelvis, being 5 or 6 inches from it. The femurs measured $17\frac{1}{2}$ inches in length. About 20 beads, with *Marginella* shells, and small disks were among the leg bones, possibly having been used as legging ornaments. Under the pelvis were twelve elliptical shell ornaments, from $1\frac{1}{4}$ to 2 inches long, the shorter diameter about two-thirds the longer, made from the harder part of a conch or other large shell, and perforated lengthwise (figure 2). On the bottom of the grave, between the knees and the elbows, were four finely worked chalcedony arrowpoints; a thin polished celt with a sharp edge; a bone polisher of uniform diameter, blunt at the ends; 5 needles or perforators; 4 bone fishhooks; and a dozen perforated scapulae of some very small animal. With the bones of the forearms and wrists were 650 *Marginella* shells; around and under the skull were 925 beads, most of them long, slender, tubular pieces. The lower jaw held a quantity of earth, in which many beads were packed. At the top of the head were 2 or 3 flint cores, a number of chips and spalls, and several perforated scapulae.

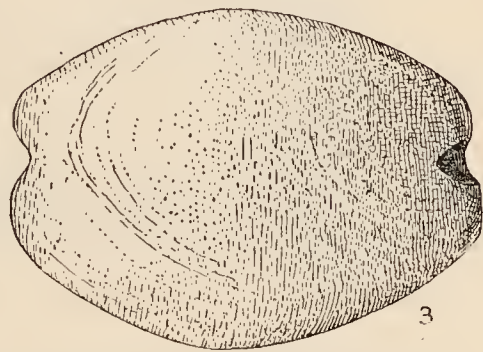


FIG. 2.—Shell disk from Gala, Botetourt county, Virginia.

Immediately west of this skeleton lay another, extended on the back, with head toward the east; the legs drawn up until the thighs were fully flexed, and pushed over to the left until the knee was almost on a level with the spine. The left humerus lay along the side, the forearm under the pelvis; the right forearm was between the pelvis and the femurs. In one of the dorsal vertebrae was imbedded a flint arrowpoint, which had penetrated the abdominal cavity from the left side; the bone had made no new growth about the injured part. The femur was 16 inches long. With the exception of the single arrowpoint mentioned no art remains were found with this skeleton.

Three skeletons of children not more than 2 years of age were next exhumed, the heads toward the east; bones almost completely decayed. Near them was a hole 3 feet deep and $4\frac{1}{2}$ feet in diameter; and just

east of this a skeleton of a child about 14 years of age was found. It lay on the left side, with head toward the east; a portion of the lower jaw lay several inches to one side, but there was no trace of the skull. As the bones were only a few inches beneath the surface, the remainder of the skull probably had been destroyed by the plow.

On the twelfth day 6 holes were found; 4 near together, each about 3 feet deep, yielded nothing; one, 4 feet in both dimensions, contained a large perforated mussel shell and a broken scraper or currier made from the leg bone of a deer (figure 3). Another, nearly 6 feet deep, and 4 feet across, had near the middle a stratum of ashes about 2 feet thick.

The first skeleton found lay on the right side, head toward the east; the skull had been destroyed by the plow. One tibia also was broken, the ends being about an inch apart, and the pieces, which were firmly embedded in undisturbed earth, not in the same line. A broken needle was with the skeleton.

Fragments of 2 other skeletons were found near the first; of one, only a portion of the skull remained; of the other, there was no trace of the skull.

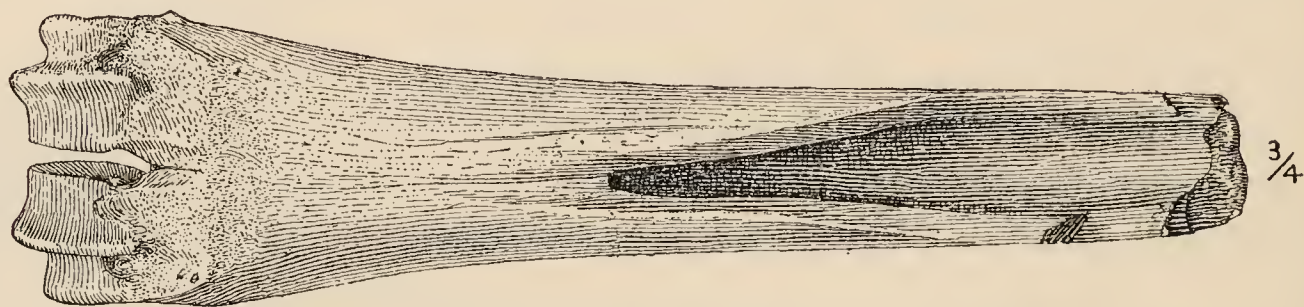


FIG. 3.—Currier from Gala, Botetourt county, Virginia.

The fourth and fifth skeletons lay on their right sides, with the heads toward the east. One had with it a perforated shell disk with a shell bead stuck in the hole.

Close to the last hole was the sixth skeleton, lying on the back, head southward, legs drawn up close to the body and turned to the left. The skull lay face upward, the front part having been torn away by the plow. A large bone fishhook, rudely finished, lay by or under the chin. The femur was $18\frac{1}{2}$ inches long.

The next skeleton was that of a very small child; only a few broken bones remained. A number of long, slender shell beads were buried with it, but so badly decayed that only 12 could be recovered.

A few pieces of bone belonging to another skeleton were found, but not enough to ascertain how it had been placed.

These 8 skeletons were lying on the clay which was nowhere, except in the holes, more than a foot below the surface; consequently they were almost entirely decayed and their position was difficult to determine.

The twelfth day a hole was found on the edge of the railway cut; most of it had been removed by that excavation. In the portion remaining was a considerable quantity of broken pottery. Two other holes, each about 3 feet deep and 4 feet in diameter, also contained some pottery.

The first skeleton was doubled, rested on the right side, with the head toward the east, near the surface. The bones were very soft. No art remains were found with it.

The next skeleton, which also was doubled, was found in the clay, resting on the right side, with the head toward the south. The back was straight, and the head bent back until the face was turned directly southward and pressed firmly against the hard wall. Two well-finished arrows, a rough knife, some flint chips, and a bone needle, with the bones of the hands, lay beneath the skull.

The third skeleton lay only a few inches below the surface; its position could not be ascertained, except that the head was southward. Half of the lower jaw was discovered; all the bicuspid and molars had been lost and the bone entirely closed.

The fourth skeleton was 18 inches below the surface, doubled, on left side, head toward the east; 14 long bone beads were around the neck.

The fifth and last skeleton was at the bottom of a hole 3 feet deep; it lay on the right side, head eastward, back straight. The tibiæ were much enlarged and roughened apparently by disease; one humerus and a few of the smaller bones were slightly affected in the same way.¹

WOOD ISLAND.

Before the great freshets of 1870 and 1877, skeletons were sometimes exposed by the caving of the eastern bank of a large island in James river near Baldwin station; but since that time none have been seen. As the surface was much denuded, it is probable that any bones which may have remained at the time of the flood were carried away by the water.

On the western side of the island are some indications of a village site. There were formerly piles of burned stones, apparently sites of camp-fires, beneath which it is claimed skeletons were found. Only two such piles remained; excavations under and around them to a depth of 5 feet showed that the earth had never before been disturbed.

Graves formerly existed along both banks of the western branch of the river; but the caving of the banks has extended past the line at which they occurred, and consequently none have been seen for several years.

In the bottom land on the western side of the river are many spots 4 to 5 feet across and about 6 inches thick, very irregular in outline, where the sandy earth is of a bright red color. They are called "fireplaces," but there is no trace of ashes or charcoal, nor are any relics found about them.

HOOK MILL.

Six miles west of Gala, in Rich Patch mountain, there is a pass through which a trail led from Craig creek to Covington. At the highest point

¹Except the fragments of skull exhumed on the first day, this was the only instance of human bones found in a barbecue hole.

in this pass there are several small stone piles, not more than a foot high, and placed on earth which is light and easily dug. Several of these cairns were removed and the earth beneath carefully examined to a depth of 3 or 4 feet without result. They are probably trail-marks.

NEAR IRON GATE.

Three miles below Clifton Forge the Jackson and Cowpasture unite to form James river. A large fertile bottom lies between them, in which many relics of various kinds have been found, flint chips being very abundant. Close to the bank of Jackson river, a few hundred yards above the junction, the upper soil was washed away in 1870, and many human bones were unearthed.

On the opposite or right bank of the Jackson the land is much higher, being underlain with native rock which forms a bluff along the water. At one point on this bluff is the site of an arrowhead factory.

This high level land extends for a mile along the stream; the alluvial soil is loose and fertile; good springs are numerous; and the mountains, full of game, come down to the rivers on every side.

Similar conditions exist in all the valleys in this portion of Virginia and the adjoining parts of West Virginia. There are many well defined plateaus and terraces along the rivers and some of the creeks.

Under such circumstances, evidences of aboriginal occupancy are to be expected, and the ordinary hunting or war implements, pipes, and ornaments are quite common. A number of cemeteries have been disclosed by floods, and it is probable that many others remain to be discovered; for in some places where relics are plentiful, and where all the requirements of Indian life seem to be met, there are no indications of permanent settlements. There are very few mounds, and none of them are large.

ALLEGHANY COUNTY.

FALLING SPRING.

In making a cut on the Covington and Warm Springs railway at this point, an aboriginal cemetery was discovered and 30 or 40 skeletons, together with some beads, a pipe, and a few arrowheads, were exhumed by the workmen. The burial ground was not more than 30 feet wide, and this width was reduced at least one-third in making the cut. In the remaining space were 2 pits or holes, neither of them more than 8 feet across, into which many bodies or skeletons had been thrown promiscuously. The first pit had been dug partially away by the laborers; in the undisturbed portion 12 skulls were found, probably less than half the original number. It was evident that some of the bodies had been deposited soon after death, the displacement of the bones being no greater than would naturally result from the settling of the earth around them when the flesh had decayed. In other cases the bones alone were interred, being intermingled and packed in a way

that could not have been possible had they ever been orderly arranged. For example, the leg bone of a child had half its length in the skull of an adult; 3 skulls were in contact among a mass of long bones, ribs and vertebræ, that occupied a very small space; a patella and some bones of a foot were lying against the face of a skull which had its vertex upward, there being no leg bones within 6 inches. This pit was nowhere more than 3 feet deep, and the uppermost bones were only 6 inches beneath the surface. No art relics were found among them.

South of this pit, separated from it by not more than a foot of intervening earth, was the second, somewhat larger, containing from 20 to 25 skeletons; as the stratum of bones had been continuous for several feet and at about the same depth as those found near the top of the pit, the exact number could not be ascertained; several had been taken out before the character of the deposit became apparent. This pit was somewhat deeper than the first; the lowest skeletons being 4 feet below the surface. In a hole barely large enough to contain them, 2 bodies were closely doubled up and laid in with heads at opposite ends—one at the northern, the other at the southern end of the hole. The skulls were so flattened and broken by pressure of the earth, and the other bones so intermingled, that it was impossible to ascertain their original position. Above these skeletons was a foot of earth, and then the other bodies were found just as in the first pit—mingled in every way and extending nearly to the surface.

No bones were found north of the first pit opened, but south of the second and west of both were a number of skeletons, usually buried singly, but occasionally 3 or 4 together. Where more than one was thus found there was at least one child or infant; sometimes only a single adult, the other 2 or 3 being young persons. None was more than 16 inches below the surface; some not more than 6 inches. All were doubled, resting on either side, with the heads toward no particular direction. Each grave had been made only long and wide enough to hold one skeleton. If another was placed in it the bones were laid directly upon those first deposited. Sometimes 3 bodies had been thus buried, one above the other, the bones being in close contact.

With one adult in the second pit was a single shell bead; with one west of the first pit were 2 pieces of worked *Columella* shell; with an infant west of the second pit was a part of a small conch, the whorls mostly decayed. South of the second pit were many fragments of a large pot, and west of it were 2 bone awls or perforators.

In some of the pits 5 or 6 skulls were found in a space not over 2 feet square. The leg bones or the vertebræ of one skeleton were sometimes forced into the fragmentary skull of another lying just beneath, or a skull would be wedged between the bones of several individuals.

Although the ground was very dry and hard the bones were quite brittle, most of them having been much broken by the pressure of the earth. The soil, varying from a foot to 30 inches in depth, rests on a

stratum of gravel and boulders, some of them as large as a flour barrel. Many large stones were in the earth containing the bodies. Several skulls were flattened by rocks thrown or laid on them at the time of burial. Two skulls had transverse incisions on the left side, such as might have been made by an iron tomahawk or small hatchet. In one grave were found nearly all the bones of a skeleton except the skull; in another all the bones of the body and arms were recovered, but not the skull or leg bones. Altogether portions of 61 different skulls were obtained, showing that at least 63 persons were buried here, besides the 30 or 40 reported by the railroad excavators.

A battle was fought at this point in the year 1760 between whites and Indians, 25 or 30 of the former being killed; but the number of skeletons of persons who could not have been engaged in such an affray, especially those of children, precludes the idea that this was the burial place of the slain on this occasion.

Just south of the southern pit were two barbecue holes, near each other, containing only a few deer bones; and northwest of the northern pit, beyond where any remains were found, was a fire bed about 8 feet across, the earth burned red to a depth of 6 inches, and covered by a layer of ashes from 2 to 3 inches thick. Not even a potsherd was found in it.

There are no traces of a village site in the vicinity. Two miles north is a place where it is said bones have been exposed by plowing, but no art relics have been discovered.

INDIAN DRAFT.

This is a small tributary of Jackson river, flowing into it 6 miles above Covington. A level bottom of about 50 acres, subject to overflow, extends along the river above the creek. Excavation was not permitted except in a narrow strip a few yards in length along the roadside. In this small space 10 skeletons were found from a foot to 2 feet beneath the surface, the bones being much decayed. Among them were the remains of 2 small children and also of a child apparently about 14 years of age. All were crowded into the smallest possible space. They lay on either side, with the heads in various directions. Most of the bodies had been buried with the flesh; of 2 or 3 apparently only the skeletons had been interred. With one this was very plainly the case. The bones were at a depth of 2 feet; the femurs lay side by side, but with the ends reversed; some ribs were at the top of the skull, which lay on the left side; the sacrum, one scapula, and some vertebræ lay at the base of the skull, while other vertebræ lay at the top in front of the face.

The only articles found with the bones were a few pieces of pottery, including some that had formed part of a vessel of $2\frac{1}{2}$ to 3 gallons capacity.

Half way between Falling Spring and Indian Draft, and a little more than a mile from each, is a mound 3 feet high and 30 feet in diameter.

It is built of loose clay and sand, with many small bowlders scattered through it. A little to one side of the center near the top were traces of human bones, completely decayed. By them lay a syenite celt. A foot from the celt was a small arrowhead.

Under the bones was an impacted mass about 8 feet across, the color of ashes, though it seemed to contain nothing but sand. It extended a foot below the natural surface and contained no trace of bone. Near the bottom of the mound and close to one side were 3 small sheets of mica.

BATH COUNTY.

SITLINGTON.

During a freshet several years since a new channel or "cut-off" was made across a level bottom at this place. When the water subsided many human bones were found heaped up in the depression. Bullets of different sizes as well as arrowheads were scattered along for more than a hundred yards. Human bones have not been discovered elsewhere in this bottom, and it is uncertain whether these had been buried here or were carried in by the current from some other place. It is possible they mark some forgotten pioneer graveyard.

A black steatite pipe and a butterfly gorget of green steatite have been found in the same field with the bones, but none of the remains common to Indian camps have ever been noticed.

On a bluff on the next farm below Sitlington a great many human bones have been exposed by plowing. They are confined to an area not more than 15 feet in diameter. From the description it seems to be a small burial pit. The only surface indication was an elevation of about 6 inches. No excavating was allowed.

DICKINSON MOUND.

At a point on Cowpasture river, 2 miles below Millboro springs, the geologic formation is somewhat unusual for this region. There are 5 distinct terraces, the lowest subject to frequent overflow, the highest being probably 120 feet above the water. The river makes a curve of about 3 miles, the isthmus formed being not more than half a mile wide. The fourth terrace and the one next above it are on the peninsula, which was an ancient island half a mile from the hills, the third terrace extending across the intervening space.

The fourth terrace is entirely absent, except on the side next the point. On it stands a mound, which after much cultivation is 30 feet in diameter and 3 feet high. A trench 16 feet wide was run through it from the northern side, but the only trace of human bones observed was a parietal and part of a frontal bone at a point 9 feet outward from the center and just above the bottom. Two feet farther in was a rectangular hole with rounded corners, but not having a well-defined or

symmetric outline. It measured 2 by 3 feet, and extended 2 feet into the original soil, the longer axis being east and west. Nothing was found in this cavity except a small arrowhead which had been thrown in with the earth. Loose in the earth above the hole, and near the top of the mound, were some small pieces of mica and a perforated slate gorget. Farther along were a flint knife, some broken arrows, and several chips. About a foot below the summit were a sheet of mica and a small piece of galena. In the original soil, with its northern edge just at the center, was an irregular excavation about 3 by 4 feet and a foot deep, the longer axis being north and south. The bottom

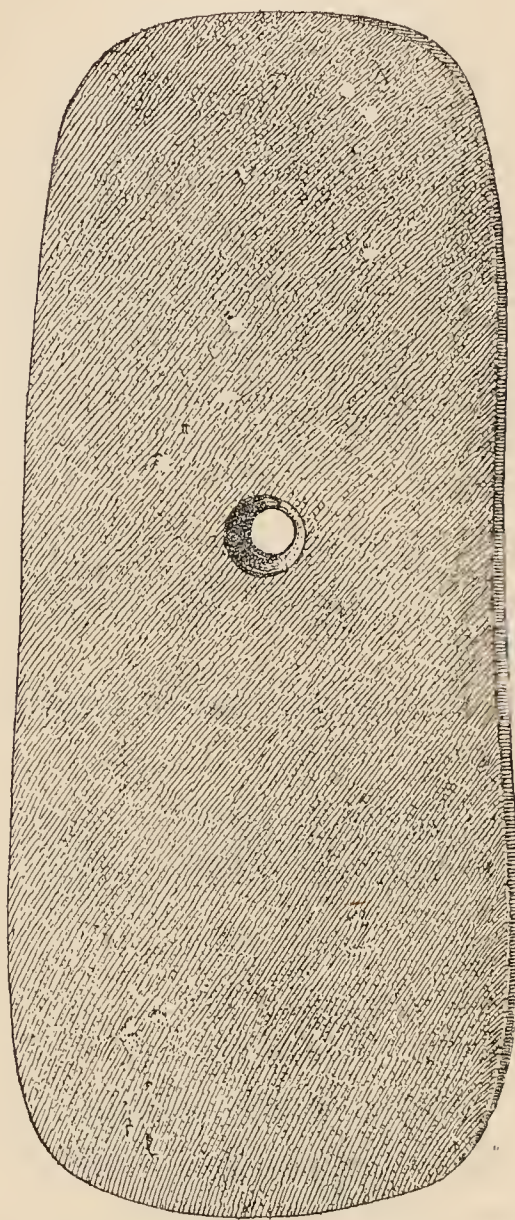


FIG. 4.—Gorget from Dickinson mound,
Bath county, Virginia.

of this hole, over a space 15 by 24 inches, was covered with a bright red substance, which had been deposited either in a fluid state or had afterward dissolved; it saturated the clay and gravel to a depth of 2 inches at the center, gradually thinning out toward the edges until it disappeared. In this red deposit were 3 gorgets, each with a single hole. All were finished and polished to the highest degree; one (illustrated in figure 4) was made of argillite, ³/₄ one was of dark chocolate slate, the third of syenite. All of these specimens were coated with the red paint. The earth just above them had the color of that in which animal matter has decayed; but nothing remained to show that an interment had ever taken place.

WITHROW MOUNDS.

On the farm of Mr Withrow, adjoining the Dickinson place, are 2 mounds. The first opened, once circular and 4 feet high, is now 30 by 40 feet, longer east and west, and not over 18 inches high. Bones have been plowed out for many years. The entire mound, except a few feet at the eastern side, was removed; 13 graves, from 2 to 4 feet across, were found beneath it. In some were traces of bone lying on the clay at the bottom, the earth having the peculiar appearance due to decay of animal matter; but in most there was no sign of bone, though the color showed what their purpose had been. After these graves were filled a large number of skeletons—not bodies—had been placed on the natural surface, and a layer of earth about a foot thick placed over them; then other skeletons were similarly laid down and covered. Only the upper layer had been disturbed by the plow.

Most of the bones were in the southwestern quarter of the mound, a solid mass 6 inches thick, all in confusion, as if they had been thrown in promiscuously. On the southern side of the mound they extended to the edge of the earth that had been plowed down, while on the northern side they did not reach more than half way from the top to the margin of the base. For the first 8 or 10 feet from its western edge the bone stratum was continuous; after this there were intervals of 6 to 12 inches from which it was absent; then perhaps 5 or 6 skeletons would be found mingled in a heap; and so they continued until some distance past the center. Wherever single skeletons, or not more than 2 together, occurred, large stones had been piled on them; this was not the case where several were buried in a small area. Perhaps the remains covered with stones had been interred in the flesh and this was a preventive against wild animals digging after them. Four single skeletons lay directly on small masses of human bones burned until nearly destroyed, only small calcined pieces remaining. Many of these burned pieces, especially the fragments of skull, were bright bluish-green on one or both sides, the stain resembling that produced by copper; but a careful analysis shows no trace of that metal. A similar deposit was at the bottom of one of the graves under the mound. No burial accompaniments of any kind were found; the teeth of one child only were seen, though many of the bones unearthed were small enough to pertain to children. It was not possible to recover any of the bones entire.

The second mound on the Withrow tract is 25 feet across and $2\frac{1}{2}$ high, made of earth and stone in equal quantities. It is surrounded by a shallow ditch about 3 feet wide, containing from 6 to 12 inches of black muck.

In the construction of this mound a hole had been dug to a depth of 18 inches and the bottom covered with a layer of burned human bones about 15 by 20 inches, an inch thick at the middle and running to a feather edge all around, in which were 3 black flint arrowheads. On this charred bone a body had been laid. No trace of bones remained, but the "grave earth" previously described was distinct in an area 2 by $5\frac{1}{2}$ feet, with a thickness of 2 inches. Stones, some fully 100 pounds in weight, had been placed over the body until they reached a thickness of 4 feet and extended about 10 feet on every side; then earth had been piled on which filled in the spaces between the rocks. Some fragments of the burned bones were of the same bluish-green color as those from the first mound.

KLEEK MOUND.

On the farm of A. G. Kleek, 12 miles north of Millboro depot, is a mound not more than a foot in height and 10 feet in diameter, near the edge of a slate bluff about 100 feet high. A trench was cut through it, but neither human remains nor art relics of any description were found.

After a freshet some years ago a number of arrowheads, stone hatchets, and bullets were found in the lowland, where the Millboro Springs and Warm Springs turnpike crosses the river. No aboriginal remains are now traceable.

WILLIAMSVILLE.

There are 2 mound groups near this village, one on either side of the Bullpasture. The first, consisting of 5 small stone mounds, is on the land of Mr Wallace, half a mile from Williamsville, on a plateau rising 100 feet above the river. All were made in the same way; the surface soil had been removed and the rocks piled up to a height of 2 feet over a space 15 or 16 feet in diameter. Three of them yielded nothing. In one, lying under the rocks and on the undisturbed earth, were a number of flint implements, including some broken or unfinished ones and a few cores; 3 fine slate gorgets, each with a single perforation; a lump of wad; and a fine monitor pipe (figure 5). In the fifth mound were a

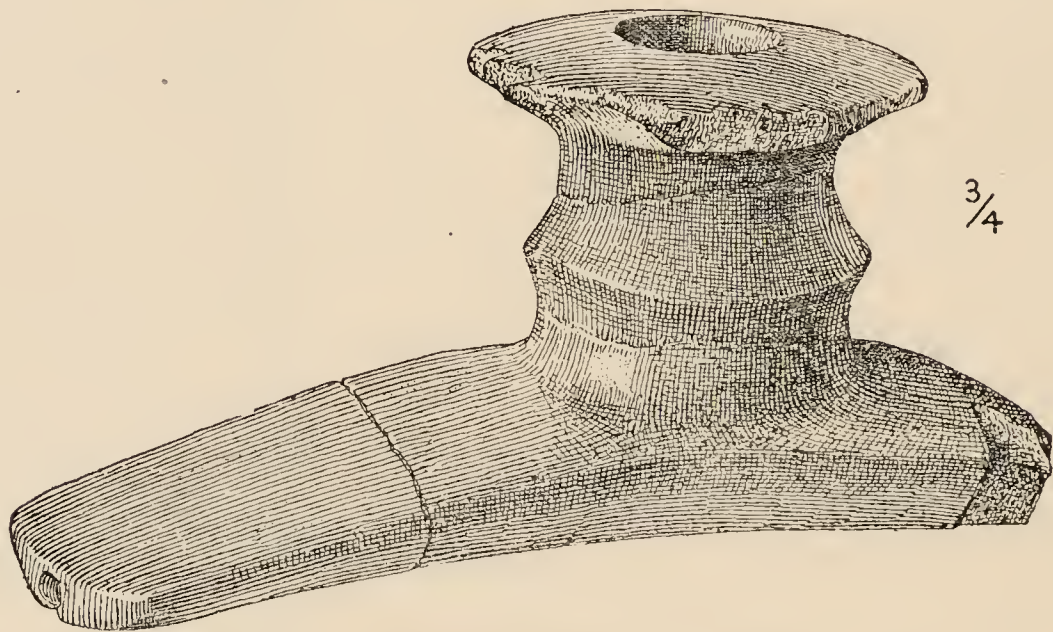


FIG. 5.—Pipe from Williamsville, Virginia.

rectangular tablet or gorget, small and not well finished; a stone pipe, shaped like our common clay pipes; and three columellas, one drilled lengthwise, another through one end. No trace of bone or pottery could be found in any of them.

The second group is on the farm of Major John T. Byrd. One is of stone, about 16 feet in diameter and 3 feet high, and contained nothing in the way of relics save 2 or 3 small lumps of charcoal. A mound similar in size and barrenness stood near this one.

The other mounds were of earth, the larger 2 feet high and 25 feet in diameter. Near its center was an irregular hole 4 by 8 feet, extending $2\frac{1}{2}$ feet into the subsoil, and filled with earth in which a large quantity of ashes and charcoal were mingled; part of the earth was burned red. All this mixture, which had been carried from some other place and thrown into the hole, was very hard and dry, while the remainder of the mound was soft and even muddy. If an interment had ever taken place here it would seem the skeleton must be perfectly preserved; but there were no remains of any character in the entire mound except a

sheet of mica, trimmed smooth on the edges, which was found loose in the earth a foot below the summit.

The last mound was 18 inches high and 20 feet in diameter. Particles of charcoal occurring 2 feet below the natural surface in the central portion showed that a hole had been dug to that depth and then filled. It contained one broken arrowpoint.

Each earth mound had a depression around the base, whence earth had been taken to construct it.

HIGHLAND COUNTY.

CLOVER CREEK.

On the farm of Mr George Revercomb, 5 miles above the mouth of the Bullpasture, is a mound 3 feet high and 60 feet in diameter. The bottom on which it stands contains about 200 acres of fertile land, all of which is subject to frequent overflow.

For 40 years human bones and teeth have been plowed out every time the mound was cultivated. Arrowheads and flint chips are numerous in the field around; but the only indications in the vicinity of a village or camp are found on the top of a high rounded knoll a mile below the mound, where quantities of mussel and periwinkle shells have been plowed up.

Beginning at the northwestern side a trench 35 feet wide was carried nearly to the opposite margin. Human bones were found almost to the limit of the excavation on every side.

At 18 feet outward from the center was a hole 3 feet in diameter, dug after the mound had been carried to a height of 2 feet, and extending through the clayey subsoil to the underlying gravel. In the bottom was a layer of bone about an inch thick. On this was a layer 2 inches thick of charcoal containing linden, oak, and poplar bark, small twigs, and several fragments of charred cloth. Resting on this was a second layer of bone, just above which were fragments of a pot whose capacity had been 5 or 6 gallons. This seemed to have been placed in the hole unbroken, as many of the pieces held their proper position around the sides of the cavity, which was lined with charred cloth. In and above the vessel were 10 or 12 large stones. The character of the bones could not be determined, as they were entirely decayed, forming a soft, sticky mass.

Skeletons, or traces of them, were continually discovered. None of the remaining seemed to have been buried at full length, though this is uncertain. Often a thin layer of decayed bone only a few inches across would be all that was left. Usually the skeletons occurred singly; sometimes 3 or 4, in one place 5, skulls were found almost in contact. All the bones whose condition was such as to allow of examination seemed to have been compactly bundled. In many instances boulders were placed on the bones, and in 2 or 3 cases bodies had been laid on

bowlders and others piled above them. Graves and barbecue holes from 2 to 4 feet across and from 6 inches to 3 feet apart, some only a few inches deep, others reaching down into the gravel, occupied a space 30 feet in diameter under the central portion of the mound. Bowlders were found in every one, those in the graves showing no marks of fire, while all the others had been much burned.

Eight feet nearly west of the center of the mound was a barbecue hole, dug after the mound had reached the height of 2 feet, which contained a large quantity of ashes, burned earth and stones, and charcoal. Among the last were nearly a quart of charred corn and beans. Corn in small quantities, with a few fragments of cloth, were found in two other holes, while charred bark was plentiful. In each of two holes was an arrowpoint. Shortly before the center was reached a broken stearite pipe (figure 6) was found near the top, close to but not among the remains of 2 or 3 skeletons. It bore evidence of long service. A few feet beyond the center, at the bottom of the mound, were the fragments of a large pot, piled together as if broken and thrown in.

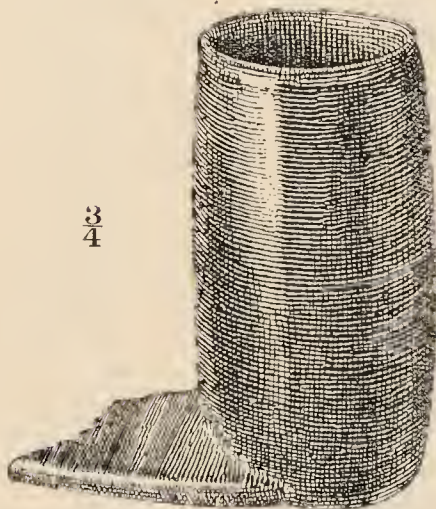


FIG. 6.—Pipe from Clover creek,
Highland county, Virginia.

Near the southeastern edge of the mound, 18 feet from the center, was the largest hole found. It measured 5 feet across and extended below the surface of the gravel nearly a foot, or about 3 feet below the bottom of the mound. It contained no trace of bone, very little charcoal, some ashes, two or three patches of burned earth, apparently burned in place, and half a cart load of bowlders of various sizes, one weighing fully 100 pounds, some of them burned, others not. It was probably a barbecue hole.

The remains of between 75 and 100 skeletons were exhumed; the number plowed out previously is not known. Often it was impossible to say whether a bone deposit represented one or several bodies. They were not buried in regular order, but a few had been interred at a time, and the mound, of alluvial material, black, sticky, and wet, thus built up irregularly.

No animal bones or shells were found; but burned earth, charcoal, and ashes were abundant in all parts of the mound, some of the holes being filled with these materials. Small deposits of bone almost destroyed by fire were similarly distributed. In one were pieces of antler and turkey bone; in another fragments of a human skull and teeth. Nothing else could be identified.

There was formerly a depression encircling the base in which water stood much of the year.

NEW HAMPDEN.

On a spur rising to a height of 200 feet just west of the village of New Hampden a large quantity of flint (or chert) has been released by the

decomposition of the limestone in which it was imbedded. It is mostly in the form of small nodules or fragments, although some of it is interstratified with the limestone. Over a considerable area on the northern end and at the top of the ridge the earth had been much dug over by the aborigines for the purpose of procuring the flint. Most of the pits remaining are quite small, few being larger than would contain a cartload of earth. The largest are on top of the ridge, where a few have a depth of 2 to 3½ feet with a diameter of 20 to 30 feet. The latter cover an area of about an acre; the others are so scattered that it is difficult to estimate their extent, probably 6 acres in all. There is no outcrop of stone at any point where digging has been done, and it appears that the searchers for the material, having learned that the flint nodules and fragments were distributed through the soil, excavated for them in such spots as proved to contain them in greatest abundance, making no effort to quarry out the stone in which they occur. At various places on the summit of the ridge, where the flint projected above the ground, it had been battered off apparently with stones, but there is no evidence that quarrying was resorted to.

Such portion of the hill as is not timbered has a heavy blue-grass sod, and the ground is visible only in a few small spots where animals have burrowed. Flint chips and flakes were found at several of these. At the foot of the spur at its northwestern terminus is a spring, around which these indications of manufacture are abundant; and it is reported that before the grass had become so thick a great many broken or unfinished implements were picked up. Spalls and chips are abundant in the face of the bank around the spring, but it can not be ascertained except by excavation how far they extend. So far as could be learned the space covered by this workshop seems too limited to have been utilized for flaking more than a small part of the flint that could have been obtained by the amount of digging apparent. It may, however, be more extensive than reported, or there may be others in the vicinity which have been overlooked.

THE PIEDMONT COUNTRY.

ORANGE COUNTY.

The country along the upper portion of the Rappahannock and its tributaries was inhabited by tribes known collectively as the Manahoac. They probably migrated westward and united with tribes beyond the Ohio whose names they took. They and the Monacan were allied against the Powhatan, though the dialects of these tribes were so diverse that interpreters were required.¹

It will be proper to describe here a mound, evidently a tribal burial place, situated in the former territory of the Manahoac and due probably to their labor.

¹ Jefferson, Notes, pp. 149, 156.

The mound stands on the right bank of Rapidan river, a mile east of the boundary between Orange and Greene counties. Originally it was elliptical in form, with the longer axis nearly east and west; but the river in shifting its channel some years ago undermined and carried away the eastern portion. Estimates as to the amount removed, made by persons who saw the mound intact, vary from one-half to two-thirds of the entire structure. For several years more or less of the earth composing it fell in at every freshet, thus keeping a vertical section exposed to view. During this time the different strata of bone were plainly visible, and at periods of low water fragments of human bones were strewn along the shore beneath. Afterward the river took a new course and the earth on the exposed side of the mound soon assumed its natural slope. At present the base of that portion still remaining measures 42 by 48 feet, with the longer axis nearly north and south. A considerable part of this has been hauled away, leaving a depression at the middle fully 20 feet across and extending almost to the bottom of the mound. As a result, the interior was very muddy, the bones extremely soft and fragmentary, and excavation quite difficult.

The highest point left by these destructive agencies was 6 feet above the level of the surrounding field; to judge from the slope of the undisturbed surface the river had left it fully 10 feet high. How much more it may have been, no one could say; if the statements concerning its original form and extent be correct the apex was at least 12 feet above the base, the latter being not less than 50 by 75 feet.

Beginning at the northern side, the earth was removed from an area 28 by 40 feet. At 7 feet from the margin was found the outer edge of a bone deposit measuring 6 by 15 feet, the longer axis about parallel with that of the mound as constructed. It was very irregular both in outline and thickness, in some places being 8 inches in depth and in others showing only a thin chalky seam. There were indications in several places that skeletons had been compactly bundled; but most of the bones were scattered promiscuously, as if they had been collected from some place of previous interment and carelessly thrown in, there being no evidence of an attempt to place them in their proper order. In the mass were two small deposits of calcined human bones in minute fragments, and beneath it were graves or burial pits which will be described later.

This bone-bed, which was at the level of the natural surface, was the largest found in any part of the mound. Two feet above it, and 4 feet within its outer margin, was another, much smaller; and numerous others were found in all the portion removed. There was no attempt at regularity in position or extent; in some places there was only a trace such as may have resulted from the decomposition of a few bones; in others it seemed that as many as 15 or 20 skeletons had been deposited. They occurred at all levels below a foot from the upper surface of the mound; but no section showed more than 4 layers above

the original surface of the ground, although it was reported that 6 strata had been found near the central portion. This would indicate that the burials were carried nearly to the top of the mound. There was no uniformity in either the vertical or horizontal space between the deposits; it was plain there had not been at any time a sufficient number of interments to cover any considerable part of what was then the top of the mound, but that a quantity of bones, greater or lesser according to circumstances, had been laid on the surface and covered with earth. Others were afterwards buried in the same way. Thus while no single vertical section would reveal more than 6 layers of bone, a careful removal of the earth horizontally would have uncovered them at probably three times that number of levels.

In the skeletons all ages were represented, for among the bones were those of very young children, while of others many of the teeth were worn to the neck.

Numerous small deposits of human bones almost destroyed by fire were scattered through the mound. When found in the bone-beds, they seemed to have been placed at random, but when found with the remains of not more than 2 or 3 skeletons they formed a thin layer upon which the latter rested.

The pits or graves mentioned above were of two kinds. One class was excavated to a depth of 2 feet in the soil, with a diameter varying from 4 to 5 feet; the others did not exceed a foot in depth, and all were somewhat less than 4 feet across. The deeper ones contained usually 3 layers of decomposed bones at intervals of about 10 inches; in the shallower there was in most cases only a single layer, at the bottom, though in a few a second deposit had been made a few inches above the first. The bones in some of the graves appeared to have been placed in their proper position; but it was impossible to ascertain with certainty whether such was the case. One of the deeper pits had its bottom and sides lined with charcoal; none of the others had even this slight evidence of care or respect. These holes were so numerous as to coalesce and take up the entire space within a limit of 10 feet from the margin of the mound; it was sometimes difficult to determine the line of separation between two bone deposits. When all the earth indicating their position had been removed, a basin to the extent and depth above indicated was left, with only a few small points of the yellow sandy subsoil rising above its bottom. Owing to the erosion and caving-in of the mound on its eastern side, the limit of the graves in that direction could not be ascertained; but it is probable they extended as near to the margin on this side as elsewhere.

No relics of any sort were deposited with the bones; a rough mortar, 2 arrowheads, and some fragments of pottery were found loose in the débris.

It is plain that this spot was for a long period the burial place of a small tribe or clan, among whom prevailed the habit of stripping the flesh from the corpse before interment, or of depositing the body else-

where for a time and afterwards removing the dismembered bones to this ossuary. That no stated intervals elapsed between consecutive deposits is shown by the varying position and size among the different bone-beds, and by the overlapping of many of the graves beneath.

It is impossible to accurately estimate the number of skeletons found in this mound; but there were certainly not fewer than 200, and there may possibly have been 250. These figures will represent, approximately, one-fourth of the entire number deposited, if the statements as to the original size of the mound be correct.

In its construction this mound corresponds closely with one opened by Jefferson a few miles above Charlottesville in low ground of the Rivanna, except that no mention was made of graves occurring below the original surface; but these might easily have been overlooked in the method of excavation pursued. The contents were such "as on the whole to give the idea of bones emptied promiscuously from a bag or basket and covered with earth, without any attention to their order."¹ As in the mound above described, "the bones near the top were in a much better state of preservation than those toward the bottom." This is due probably less to their being of much later deposit than to the drier earth near the top. We are further told (pp. 161, 162) that "a party [of Indians] passing about thirty years ago [i. e., about 1751] through the part of the country where this barrow is went through the woods directly to it, without any instructions or inquiry, and having staid about it some time, with expressions which were construed to be those of sorrow, they returned to the high road, which they had left about half a dozen miles to pay this visit, and pursued their journey." It is very unfortunate that no one took the trouble to learn to what tribe these travelers belonged, as this knowledge would have given a clue to the fate of the aborigines of this part of Virginia.

MADISON COUNTY.

Near the Orange and Madison road, 2 miles from Rapidan river, is an outcrop of steatite half a mile in length, but nowhere more than a few rods in width. At the extreme northern end are 5 or 6 excavations, none more than a foot deep and 10 or 12 feet across. The stone is either too siliceous or too porous to be suitable for aboriginal purposes, hence was but little utilized.

CULPEPER COUNTY.

WAYLAND MILL.

On Crooked run, a mile and a half west of the Orange and Culpeper road, an outcrop of steatite fully half a mile in length has been excavated over its entire extent. At this place is the largest excavation in this material yet discovered; it is fully 150 feet across. On one side the

¹Jefferson, Notes, p. 158.

bank is about 10 feet high; the other side being on the slope of the hill shows less elevation. The pit is partially filled with muck and rubbish, so that it is level within over an area of 50 by 60 feet; hence its entire depth can not be ascertained except by clearing away the accumulated material. The other pits are at the present time from a foot to 4 feet in depth, and 10 to 50 feet in diameter. Several thousand cubic yards of stone were excavated by those to whom these remains are due.

AYLOR FARM.

On the farm of H. I. Aylor, $2\frac{1}{2}$ miles from Wayland mills, is another aboriginal quarry, less extensive than the one above mentioned.

SHENANDOAH AND UPPER POTOMAC VALLEYS.

AUGUSTA COUNTY.

Several mounds formerly existed in this county, but all have been obliterated by cultivation except one on Middle river, a few rods from the bridge on the Staunton and Churchville road. This, after long cultivation, is now about 5 feet high.

ROCKINGHAM COUNTY.

TIMBERVILLE.

A mile north of Timberville was a small mound, 2 feet high, on a slight natural elevation near the left bank of the Shenandoah. It contained several skeletons extended at full length at the level of the natural surface. Flat stones were set on edge around the bodies and others placed over them.

LINVILLE.

Two miles northwest of Linville, on the farm of Mr S. M. Bowman, is a mound near the bank of Linville creek. After heavy rains the mound is often the only dry spot between the hills for 2 or 3 miles along the stream.

It now measures 65 by 75 feet, and 3 feet high, the longer diameter trending northwest and southeast. Over the entire surface of the mound, to a depth of 6 inches, there is not so much as a space 3 inches square that did not contain fragments of bone which had been dragged down from the top by cultivation.

Five trenches were extended inward from the edge of the mound. For a considerable distance no remains of any description were found in any of these except the one from the southwestern side. At 24 feet from the center of the mound a small hole a foot deep contained the decayed bones of a young child, which, judging from their disposition, were evidently the remains of a skeleton burial.

When undisturbed bones were reached the inner ends of these trenches were connected, isolating a mass of earth nearly circular in

form, 36 feet in diameter, which was filled from the top to fully 2 feet below the level of the original surface with skeletons and bone-beds in the utmost confusion. There was scarcely a cubic foot of earth in which human remains of some description were not discovered. Sometimes a single skeleton, perhaps that of a very young infant, would be found, the few bones remaining being in their proper position, with many beads around or among them; again the long bones of several adults would be laid closely together, like sticks tied in a bundle. Occasionally 5 or 6 skulls would be in contact, with not a lower jaw near enough to have been deposited with any of them; or an entire skull would be in a mass of bones many of which belonged to some other skeleton. Cremated human bones were found in little deposits by themselves, or under the bundled skeletons of one or more individuals, or in the middle of a stratum of bones a foot thick showing no evidence of incineration.

When the southeastern trench reached the bone deposits it had a width or face of 18 feet. At the western side of this, a foot above the bottom of the mound, were the bones of an infant with a large number of (*Marginella*) shell beads. Six feet from the latter, at the same level, was a skull on which lay the frontal bone of another. These were at the edge of a bone pile a little less than 3 feet across, containing 10 skulls, some of them burned to cinders. Among them was a black steatite pipe, and above them, with an intervening layer of earth from 8 to 10 inches thick, was a thin and very uneven stratum of charcoal.

Just at the middle of the face was a hole 6 inches deep; in the bottom lay a skeleton, doubled, with a lot of *Marginella* shells among the bones of the head and neck. Above this was a bone bed 3 feet thick containing 14 skulls; in it were a drill and a knife of black flint and 5 bone needles. Two feet nearer the center were piled about a peck of small fragments of bones, some of which were calcined.

Four feet farther from the eastern side of the face, a foot from the top, began a mass of bones which reached in an unbroken layer for 10 feet north and south, with fully half that width at the middle, and in some places more than a foot thick; among them were a rough slate gorget, a perforator of deer bone, and 6 triangular arrowheads. They were packed so closely together that the earth could not settle between them. Under them lay the bones of a very small child in their proper position with the head toward the northeast; many *Marginella* shells were scattered from its head to its knees. Within a few inches, and parallel, were the remains of another infant, also in position; with it also were a number of *Marginella* shells and 12 rather long columellas. A little farther toward the center was the skeleton of a third infant, near which were found half a pint of *Marginella* shells, as well as 38 columellas of various lengths.

Under these, its outer margin 18 feet from the center, was a burial pit a foot in depth, 10 feet long, and from 3 to 3½ feet wide, the longer

axis parallel with that of the mound, in which were the remains of 32 adults and 7 children. Only the bones had been deposited, and they were mingled in the most promiscuous manner. In the southeastern end of the pit there were many fragments of human skulls, limb bones, and vertebræ, some of them completely incinerated. The only other relics found were a few columellas split lengthwise, none being entire.

Almost exactly at the middle of the bank, was a grave 4 feet in diameter and 10 inches deep, in which lay the skeleton of an adult, lying on the right side, nearly straight, with the head toward the south. Three columellas $2\frac{1}{2}$ to 3 inches long and one 6 inches long lay by the head.

When the bank was 6 feet from the center, 14 skeletons mingled with earth were discovered at its eastern end. They occupied a space 4 feet in diameter and a little more than 3 feet in thickness, extending a foot below the original level. A clay pipe, many *Marginella* shells, 2 long columellas, and the cremated bones of a child and an adult were among them. Four of the skulls lay almost in a vertical line separated by 2 to 4 inches of earth.

Within a few inches of this deposit, toward the center, was a small bone-bed a foot thick, near the middle of which was a thin stratum of the cremated bones of a youth and an adult; scattered through it were 2 steatite platform pipes, 4 panther claws, and 4 columellas. Five or 6 skulls also were found. Immediately below lay the bones of an infant in their proper position, with disk and *Marginella* shell beads; a little nearer the center on the bottom of the mound were the remains of another infant, who evidently had been born but a few days, and with which were 38 columellas and many disk beads.

Near the center of the mound, in soft black earth apparently resulting from decay of organic matter, was a bone deposit 8 feet across. At its western margin was the skeleton of an infant¹ having small beads scattered from head to feet. Near this, among the bones, were other deposits of beads; and at various points a broken and a perfect clay pipe, 2 well-made steatite pipes, and a triangular arrowhead were found. The arrowhead, like all other finished flint implements found at this locality, was delicately worked, thin, symmetric, and sharp. A femur was found that had sustained a compound fracture, the ends having overlapped fully two inches and healed in that position. Another femur was greatly enlarged, rough, and with a deep hole apparently of tubercular origin in the side running parallel with the shaft.

A foot above this deposit was one similar but smaller. In it were many fragments of burned bones of various parts of the body, as well as a number of teeth.

Four feet west of the center was a grave 2 feet deep, in which lay a skeleton, doubled up, on right side, with the head southward. With it

¹ No infant in this mound had been folded, though none of the many skeletons of youths and older children were extended.

were a gorget of fine finish; a lot of red and yellow ocher; a large columella; disk beads; a net or weaving needle, highly polished from use, with a hole in the end opposite the point (figure 7);¹ a bone ornament in the form of a comb, and the upper portion of another having a yoke or Y shape, delicately worked and covered with incised lines (figures 8 and 9). It will thus be seen that the number of burial accompaniments was unusually large for this section.



FIG. 7. — Bone
needle from
Linville, Vir-
ginia.

Over these remains, at the level of the bottom of the mound, was a folded skeleton, resting on the left side, the head to the south, with which were 2 columellas, one 5 the other 6 inches long, the latter having a bone drill stuck in the perforation and broken off even with the end of the shell. Just at the northern edge of the grave were the bones of an infant; upon them was the outer whorl of a conch shell which had been partly filled with about a pint of *Marginella* shells and inverted over the body. Above the conch, with less than an inch of earth between, lay the skull of an adult whose skeleton, which rested on the right side, was doubled, the head being toward the south.

At the center, a foot above the bottom, were human bones, of large size, cremated before the flesh had been removed; some fragments only 2 or 3 inches long were burned to a cinder at one end while the other ends were as fresh in appearance as any bones found. A columella and a panther claw were with them, but may have fallen from the bone stratum above. In the earth under the burned bone was considerable charcoal which reached a few inches north of it and stopped at the edge of a grave a foot deep and 4 feet across, in which were 2 skeletons; one doubled, on right side, head toward the south; the other apparently in the same position, but so decayed as to make this uncertain. With the first were 2 bone needles near the top of the skull, 3 columellas 5 to 6 inches long under the skull, and a quartz crystal near the chest; with the other were 5 columellas, a flint knife, a flint drill, and a lot of shell beads, the latter scattered over a foot in area.

Immediately north of this grave was another a foot deep containing the skeleton of an adult; the skeleton of an infant with columellas and *Marginella* shells lay just above it. On the natural level above these was a skeleton accompanied by a very fine gorget, a celt scraper, 7 pieces of hematite which

¹This implement had been longer, with a hole farther from the point, but had been broken and a new eye drilled in it.

had stained the earth about them a bright red, 3 bone polishers, 4 bone needles, and 6 quartz crystals, one of the latter with a slight groove around a projection from the end. Over this was a layer of charcoal extending upward to the 10 foot stratum of bone above mentioned, and containing several hundred *Marginella* shells that showed indications of having been burned. Above the northern margin of the charcoal layer was a skull by which lay 14 columellas; 6 inches to the northward of this was another skull with a flint drill, 2 arrowheads, some cores and chips, 2 bone polishers and 2 bone needles; and a foot northward from the last was a third with 3 columellas. These were all at the bottom of the bed, and it was impossible to trace any connection between them and the other bones.

A grave southwest of the center contained a doubled skeleton, on the left side, head toward the south; by the skull lay the lower portion of the ornament shown in figure 9,¹ and a number of animal ribs 5 or 6 inches long and obtusely pointed at one end; at the northern edge of the grave on the original surface was a mass of red ocher. From this level to the top of the mound, over the grave and on every side of it, was a mixture of bones, many of them burned; beads, both shell and disk; and many columellas.

Eight feet east of the center was a funnel-shape burial pit 6 by 8 feet at the top, extending the entire depth of the mound, the sides being slightly incurved. An inverted pot, holding about 1½ pints, lay at one side. There were scores of individual skeletons, but all the bones were crushed, broken, and displaced, so that very few pieces of skull more than 2 or 3 inches in diameter were found. Under this deposit was a grave a foot deep, 4 feet north and south by 5½ feet east and west. In this were 18 skeletons, including those of 2 infants with whom were mussel shells and shell beads. Among them were a piece of decayed wood (apparently a pine knot), 22 columellas, a celt, some disk beads, a bone needle, and potsherds. At the northwestern corner, partly on the natural

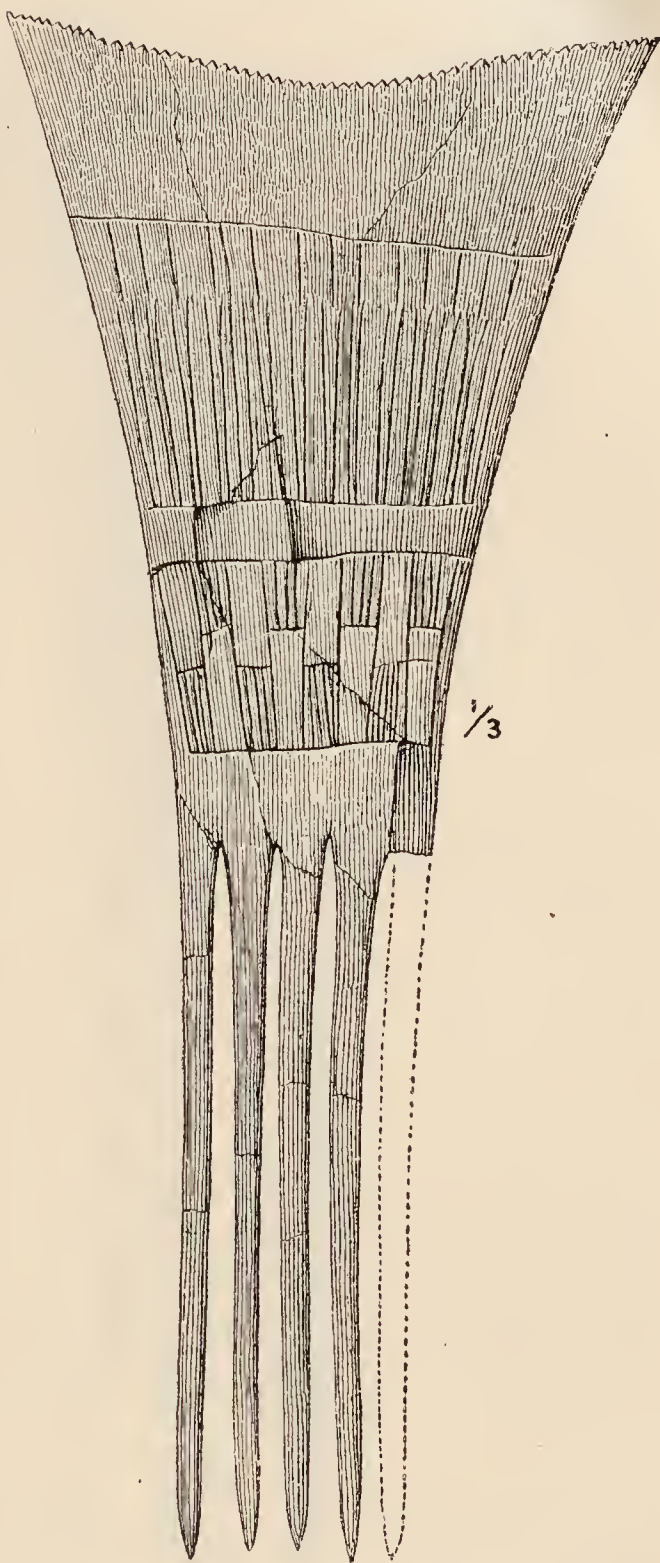


FIG. 8.—Carved bone from Linville, Virginia.

¹ One of these “combs” is 15½ inches, the other 17 inches, in length.

surface and partly within the grave, was a doubled skeleton, on left side, with head toward the south. Behind the head was a pot lying on its side, broken in pieces by the pressure of the earth, and containing a tortoise shell and fragments of animal bones. Almost touching the pot, on the opposite side, was another skull lying vertex upward on the

scapulæ and backbone; the arms were in their proper places, but the bones of the legs and lower part of the body were not distinguishable among those which rested upon them. This apparently was a skeleton burial, with some effort to place the bones as they belonged. Under and in contact with one scapula was a patella belonging to a much larger person.

The bones in the upper portion of the funnel-shape pit were continuous with a stratum a foot thick, 25 feet long, and with an average width of 10 feet. This terminated at the extreme northern edge with a similar but slightly smaller pit.

Of necessity the face or bank of the trench was in a very irregular line, each deposit, except the 25-foot bone-bed, having been thoroughly worked out as discovered. The projecting portions were next removed with the same general results as already described, though there

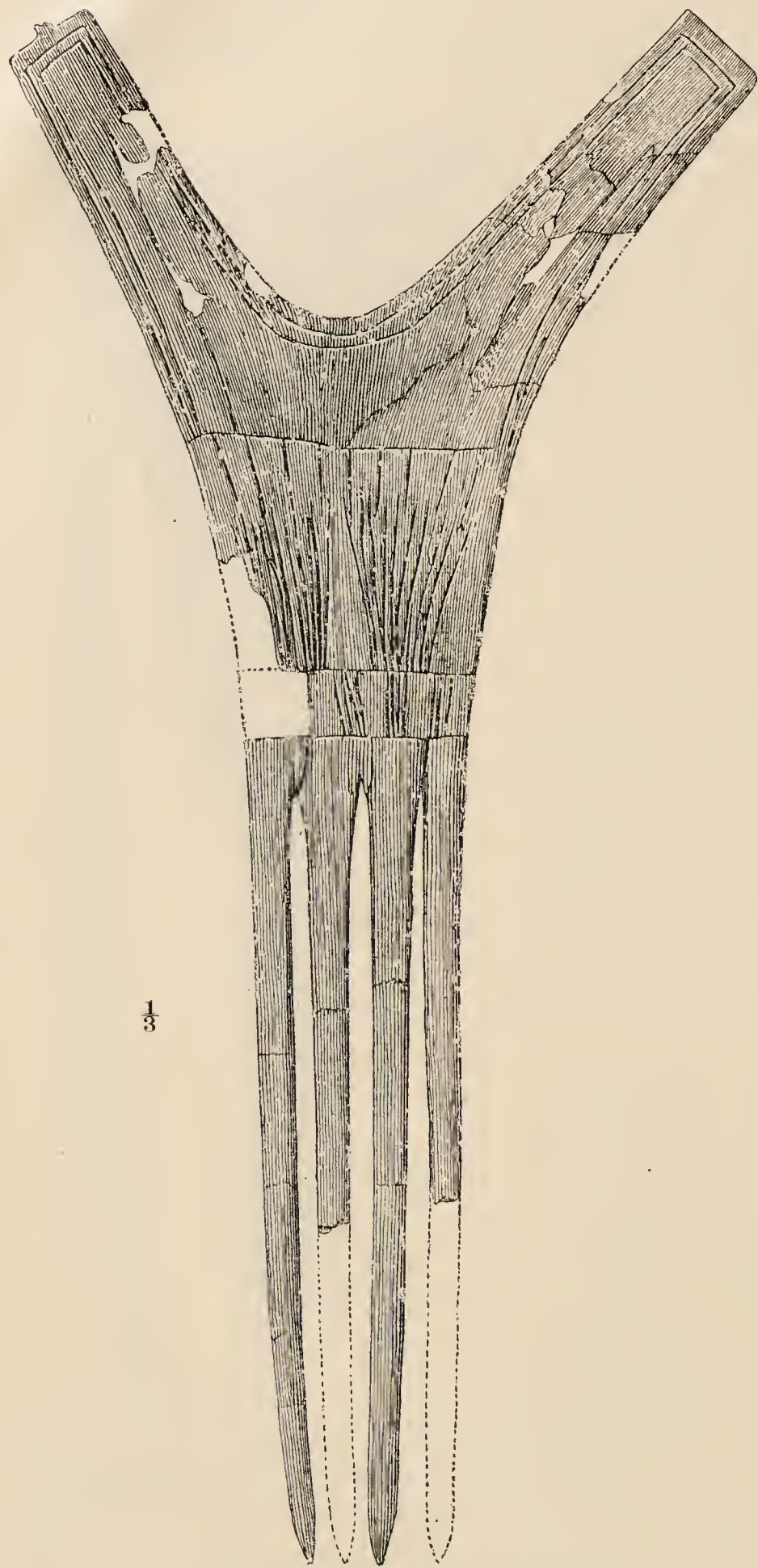


FIG. 9.—Carved bone from Linville, Virginia.

was nothing of striking interest found in them. When the line was rectified the face was 12 feet north of the center point. Here 3 small graves about 10 or 12 inches deep were found almost in a line, each containing skeletons with columellas and *Marginella* shells.

Coincident with the face at the western side was the edge of a saucer-shape depression in the original soil, a little more than 4 feet across and 16 inches deep at the center. It contained a bed of ashes and charcoal 3 inches thick at the middle and gradually thinning toward the sides. On this and nearly parallel lay the arm and leg bones of 2 adults, burned black, with no traces of other bones belonging to the same bodies. Lying on them, in contact, was the spinal column of an adult, very soft from decay, not in the least degree charred or even smoke-stained. The skull lay at one side of the depression; at the opposite side was the head of a humerus; between these were many other bones so decayed that their character could not be ascertained. As the vertebrae were in their proper position, the unburned bones must have belonged to more than one individual, whose remains had evidently been placed on the cremated bones after the latter had become cold.

North of the center, 6 feet from the cremated bones, was a skeleton a foot and a half above the bottom of the mound, with a number of shell beads. A few feet east of this was a grave 8 inches deep, large enough to contain only a body closely folded, which rested on its left side, with head toward the south. At the top of the skull was a broken clay pipe.

A foot lower down and almost at the limit of the burials was a large mortar, concave on both sides, but not otherwise dressed.

In the funnel-shape pit which terminated the large bone stratum, as well as in a few places in the mass itself, were found bones which, judging from their position, may have belonged to a bundled or doubled skeleton, but the evidence is too slight to state this as a fact. Only one relic was found in the northern half of this bone-bed—a dressed piece of mussel shell an inch and a half square with a hole drilled near the center.

Under the pit was the end of a grave a little more than a foot deep, barely 3 feet wide, and extending $12\frac{1}{2}$ feet on a line exactly east and west. In it were 19 skeletons, including those of 3 infants and of 2 or 3 older children. Only one was doubled, all the other bones having been promiscuously thrown in. The only specimens found were a few *Margarella* shells and disk beads.

The soil of the bottom is the black loam found along water courses which overflow frequently; it is very muddy when wet, but easily dug when dry. This probably accounts for the location of the mound. Many higher places close by on each side of the creek afford ample level space for the construction of such a tumulus, but the soil is a limestone clay, difficult to work by aboriginal methods. The many ways in which the remains were deposited are explicable only by the supposition that this was long a general burial place. But there was no village or camp in the immediate vicinity, for no burned earth or stones, no ashes or animal bones, very few pottery fragments, and not half a dozen flint flakes were found in the entire structure. The dismembered condition of

remains and the absence of relics in the bone-beds denote the periodical collection and interment of skeletons, while the position of the bones and the finding of various relics in nearly every grave with only 1 or 2 skeletons indicate that other persons were buried soon after death. This was especially the case of infants, nearly all of whom had been interred with many beads.

Moreover, the bodies occurred at all levels. In many places graves had been dug after the mound had been partly or even wholly completed. In others—especially in the bone-beds and in 2 or 3 smaller deposits somewhat similar—bones seem to have been laid or thrown on the surface of the mound and covered with soil. The earth was so uniform in color and consistency that this could not be proved.

The total number of skulls found was 388, but in the bone-beds, as well as in other places where the bones were much broken, only those were counted of which enough remained in position to make certain there could be no duplication. Neither was any account taken of the fragments of cremated skulls found in more than 20 different spots. The mound had been dug into several times previously, in a desultory way, yielding fragmentary skulls to everyone who chose to continue excavation. A great many have been destroyed by the plow. Altogether it is probably safe to say that as originally constructed this was the cemetery of not less than 800 individuals. There is no other mound nor any indication of another burial place in the neighborhood; but half a mile southward, on the opposite side of the creek, a great quantity of chips, spalls, and unfinished implements of flint foreign to the locality have been found.

PAGE COUNTY.

KITE PLACE.

On the land of A. J. Kite, one-fourth of a mile west of Grove Hill, on a narrow ridge, is a mound nearly leveled by cultivation. It is now 75 feet long, north and south, 20 feet wide, and a foot high. Mr Kite states that a few years ago he found near the extreme northern end, just beneath the surface, 17 extended bodies radiating like the spokes in a wheel, the skulls lying almost in contact. Over the face of one skeleton was a sheet of mica about 10 by 12 inches and nearly an inch thick, supported by a stone on each side of the skull, no other stones being found. The only art relics were a few gorgets. Afterward, near the center of the mound, Mr Kite unearthed a sandstone platform pipe with a turtle carved on top of the bowl, the legs and tail in relief on the sides, the head projecting on the side opposite the stem hole; also about a peck of well-finished quartzite arrowpoints or spearheads.

At the extreme southern end a few boulders rested on the original surface over a narrow space about 5 feet long, near one end of which was a side-notched ax and near the other end a sheet of mica; between them was a slate gorget with 2 perforations. A gorget was found at

one point on the bottom; and chips of quartzite, scraps of mica, and pieces of arrows were abundant through the entire structure.

In the bottom land below this mound the flood of 1870 uncovered between 200 and 300 aboriginal fire beds, from 4 to 6 feet in diameter, either on the bare surface or on a stratum of boulders carefully placed. Quantities of flakings, broken and burned bones, burned stones, and other indications of a village site were washed out.

PRICE FARM.

On the farm of C. D. Price, half a mile north of Alma, on the summit of a hill overlooking the largest bottom on the Shenandoah, is a mound 20 by 28 feet and 2 feet high, composed of earth and stone in about equal quantities.

At the center, over an area 4 feet in diameter, the stones reached to the hard gravelly subsoil. No relics or traces of bone were in this pit, but it was evident from the appearance of the earth that a body, or bodies, had been deposited in it.

LEE LONG FARM.

On a high point on the farm of Lee Long, adjoining the Price place on the north, is a small cairn similar to many others in this section. Nothing was found in it.

PHILIP LONG FARM.

On the farm of Philip Long, 3 miles southwest of White House ford, are 3 mounds which, after much mutilation by plow and spade, are not more than 2 feet high, and measure, the first, 50 by 25 feet, the longer axis northeast and southwest; the second, 25 feet northwest from the first and parallel to it, 38 by 28 feet; and the third, 10 feet north of the second, 37 by 25 feet, the longer axis northwest and southeast. They are mentioned in Kercheval's History of the Valley, which also states that many Indian graves exist immediately around them; but no trace of these can be found, and it is probable that the author alludes to depressions from which earth was taken to form the mounds.

In the first the central portion was excavated over an area 12 by 25 feet. At several places southwest of the center small fragments of bone were found, but not enough to denote the number or position of the bodies. The earth around them was unchanged in appearance or color. Six

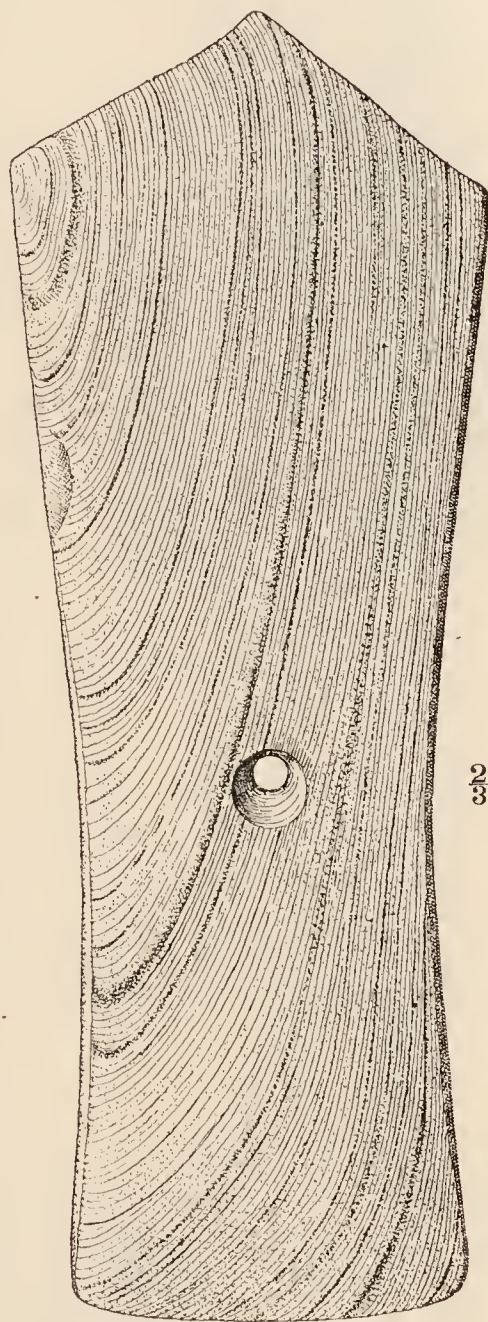


FIG. 10.—Gorget from Philip Long mound, Page county, Virginia.

feet southwest of the center in a space not more than 4 feet square were 4 deposits of relics, all on the original surface, with only one of which were any traces of bone. These consisted of a striped slate gorget (figure 10), a rectangular slate gorget with 2 holes, some red ocher, several pieces of quartz crystal, some small, smooth quartz pebbles,

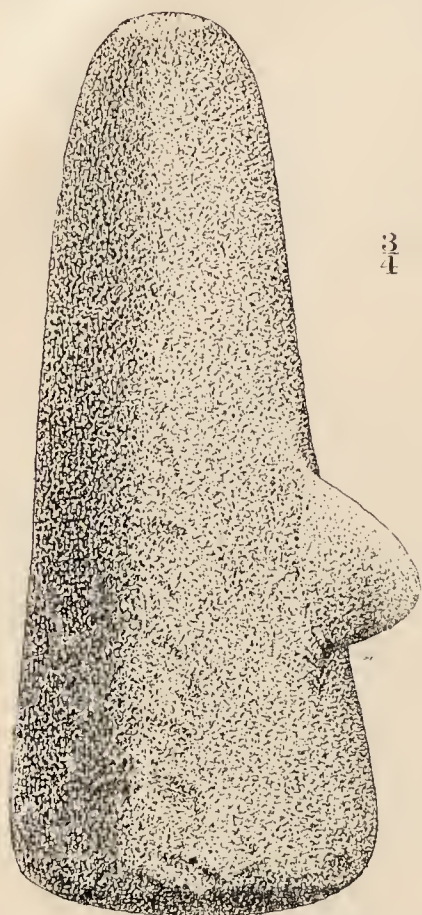


FIG. 11.—Unfinished pipe from Philip Long mound, Page county, Virginia.

$\frac{3}{4}$

a very large flint flake, a flint knife, 6 arrowheads, and a gorget-form piece of slate roughly finished; finally, a large triangular knife, several pieces of quartz, 2 rough celt scrapers of basaltic rock, and an unfinished pipe of micaceous sandstone (figure 11). The mound was composed entirely of earth.

In the second mound, 13 feet west of the center, were some fragments of bones with which were a sandstone platform pipe (figure 12), 8 arrowpoints and spearheads of flint and crystal, a small gorget of shale, another of sandstone, a small plate of mica, and pieces of crystal.

The third mound contained about the center several wagon loads of stones which had all been taken out and thrown back by a previous investigator. It is reported they formed a vault in which was a skeleton with a few relics. Eight feet west of the center were fragments of bone, with a single tooth worn to the neck; and the same distance south of the center were a broken gorget with one hole, another with two holes, a third unfinished, and 2 arrowheads. Four feet northwest of the center were some soft fragments of the skull of a body that extended toward the west.

In the river bottom under the spur on which these mounds are built some human bones were exposed a few years ago by a freshet,



$\frac{3}{4}$

FIG. 12.—Pipe from Philip Long mound, Page county, Virginia.

and a great many spalls, chips, and implements in various stages of manufacture have been picked up.

BRUBAKER FARM.

On the farm of A. D. Brubaker, near the mouth of Massanutten creek, is a small spot on the bank of a level terrace where a mound is

said to have stood. No elevation is now apparent, but arrowheads and chippings are very plentiful.

GANDER PLACE.

On the top of a hill near the house of D. H. Gander, half a mile above White House ford and nearly opposite the mouth of Massanutten creek, was a small stone mound which has been destroyed. On an opposite island the flood of 1870 washed out burned stones, fragments of pottery, flint chippings, and several skeletons.

BOWERS FARM.

On the farm of J. C. Bowers, $3\frac{1}{2}$ miles west of Luray, opposite the mouth of Mill creek, on the first ridge rising above the river, is a mound of earth and stone 30 feet in diameter and 30 inches high. On the northern side is a depression 15 by 30 feet, 2 feet deep, the slope being continuous from its bottom to the top of the mound. Most of the stones were at the central portion where several wagon loads of boulders had been carefully laid up in the form of a V, with the opening toward the east. From the apex to the extremity of either arm was between 12 and 13 feet. The right or southern arm rested on the undisturbed original surface. No relics or traces of bone were found in or under it. Beneath the left or northern branch was an irregular excavation filled with large stones, between which very little earth had settled. The western end of the excavation was nearly circular, 4 feet in diameter and a foot in depth, the bottom being covered with a mixture of white clay and sand, which had been put there while wet, and pounded smooth and level. It was as hard as cement and under the pick split into small flakes. Traces of bony substance were found in it; also 3 gorgets sufficiently far apart to denote that they belonged to different individuals. One, similar to that illustrated in figure 10, was of green slate; another was of black slate, rectangular, with two perforations; the third, like the second in form, of black shale, much softened by moisture. A trench a foot in width joined the northeastern side of this grave to another measuring 5 to 6 feet across, with an average depth of 2 feet, the sides of which were covered with a substance similar to that on the bottom of the first. It was roughly made, with no attempt at regularity or symmetry, and contained no relics or traces of bones. An excavation a foot wide and the same in depth, with smooth, even sides and bottom, extended $2\frac{1}{2}$ feet from the eastern side; nothing was found in it. The arrangement of boulders and the peculiar shape of the grave pits in this mound were different from anything else observed in Shenandoah valley.

BURNER PLACE.

In the river bottom, half a mile above the Bowers farm, near Jacob Burner's distillery, a village site was uncovered by the flood of 1870.

Little information concerning these remains or the character of the art products uncovered by the freshet was obtainable.

VEENY FARM.

On a hill on the farm of Lee Veeny, half a mile above the Burner place, are 2 small mounds, both of which have been opened. It is reported that pottery was found in one.

RUFFNER PLACE.

For nearly a mile along the bottom lands of Reuben and Ben Ruffner, below Ruffner ford, a mile north of Hamburg, the flood of 1870 disclosed at intervals hearths and fireplaces, probably over 200 in all. They were close to the river bank and from 2 to 6 feet in diameter. Quantities of flint and quartzite chips, burned stones, fragments of pottery, many fine arrowpoints and spearheads (one of Flint ridge stone), and a very large black steatite platform pipe have been found.

BAUSERMAN FARM.

On the farm of George Bauserman, a mile and a half above Bixler ferry and 3 miles northwest of Luray, is a village site on a low bluff overlooking the bottom. Chippings are abundant, and many relics have been found here and in the adjacent bottom lands. The last Indian massacre in the valley occurred at this point in 1766.

DEAL FARM.

Three miles northwest of Luray, opposite Shuler, at Bixler ferry, on the farm of Mrs Deal, are 2 mounds on a plateau that rises about 200 feet above the river bottom. They are a hundred yards apart on a line nearly northwest and southeast. The one nearer the bluff is 21 feet in diameter and 18 inches above the surrounding level. On the northern side the slope continues unbroken to the bottom of a ditch a foot deep and 4 feet wide which embraces a third of the circumference. The surface of the mound was covered with a single stratum of bowlders, none appearing below these until within 4 or 5 feet of the center on every side. Here they began to increase in numbers and finally extended to the bottom of a pit 4 feet in diameter which reached to the gravelly subsoil at a depth of 18 inches. Across the bottom of the pit, in irregular spots and patches not wider at any point than 18 inches, was a streak of powdered specular iron ore. On this, close to one edge of the pit, were some scraps of mica, a few flint fragments, pieces of quartz crystal, a lump of red ocher, a slate gorget with two perforations and curving sides, a rectangular gorget with two perforations and another of similar shape but with one perforation, and a chalcedony spearhead nearly 6 inches long (figure 13). There was no trace of bone. Evidently a body had been deposited at the bottom of the grave with the accompanying articles, stones placed over it until they reached up

the slope of the removed earth, which had been thrown out on every side alike, earth piled over and around them, and the mound covered with a layer of bowlders.

The other mound was somewhat larger, being 24 feet across and 2 feet high. It had been previously excavated, but examination of so much as remained undisturbed showed that it was constructed in the same manner as the first. Four feet from its base was the inner margin of a shallow ditch extending two-thirds of the way around on the northern, western, and southern sides.

HENRY BRUMBACK FARM.

On the farm of Henry Brumback, $3\frac{1}{2}$ miles north of Luray, near the bank of Pass run, just above its confluence with Hawksbill creek, is a mound 3 feet high and 80 feet in diameter; but before being cultivated it was 8 or 9 feet in height. The bottom is level, subject to overflow, and composed entirely of material deposited by the creek, none of it being due to the decomposition of rock in place. Bowlders of varying size from the foothills on the east occur sparsely along the stream, but constantly increase in numbers toward the hill until the ground is covered with them. Spalls, chips, fragments, and entire specimens are abundant on the surface; and though all the facts point unmistakably to a comparatively recent date for the deposition of the soil, many of these objects are perfect types both in form and material of the "paleolithic" implements from the gravels.

Five circles were marked off from the center of the mound, the radii in multiples of 5 feet, giving a diameter of 50 feet to the outer circle. This area was excavated to a depth of 2 feet below the surrounding level, each zone being entirely removed before the one next interior was touched. In the outer zone at least 40 different deposits of human bones were found at various depths, a dozen or more of them being remains of cremated skeletons. They were so decayed that the method of burial or number of individuals was not determinable. None extended beyond the outer circle. On the eastern side was a small pile of stones on the original level; nothing was found under them.

BULL W=23—4



FIG. 13.—Spearhead from Deal mound, Page county, Virginia.

At the beginning of the second zone, 20 feet from the center, on the northern side, were 3 skulls almost in contact and lying on a few of the longer bones which were much decayed and broken. Two feet from these were 2 others under the same conditions. For several feet on each side and toward the center from these skulls every stroke of the pick uncovered human bones, most of them soft as wet ashes. Northeast of the center, mostly in this zone but partly in the outer one, was a thin layer of pine bark charcoal with some small oak sticks or limbs, apparently spread with some care over the surface of the mound as it stood at this stage. Below it the earth showed no marks of fire; but resting on and coextensive with it was a stratum of burned earth having considerable variation in thickness. A similar but smaller deposit was near the skulls above mentioned.

Sixteen feet south of the center were the remains of a young buffalo, consisting of a skull with the nubs of the horns, a portion of the lower jaw, some cervical and dorsal vertebræ, the latter with the ribs still attached, the pelvic bones, and a few caudal vertebræ. No trace of limbs or scapulæ were present, though all the bones found were in their proper relative positions, the ribs extending into the earth above as if the body of the carcass had been thrown on the ground and covered with earth during the construction of the mound. On the sandy subsoil a few inches west of these bones, and 8 or 10 inches lower, was a folded human skeleton. The teeth were much worn, the bones slender but long, the femur measuring 18 inches.

On the eastern side was a cart load of bowlders covering an extended skeleton, with the head toward the north; near the hips were 5 small triangular quartzite arrowheads with indented base, and a knife of similar pattern of green flinty stone. The stones extended over the northern end of a hole of very irregular outline a foot deep, 6 feet long, and 2 to 3 feet wide, the bottom burned red to a depth of 2 to 3 inches, and covered with an inch of pine charcoal, on which lay a lot of decayed bones, certainly the remains of more than one body; with them, at the southern end, were a triangular knife and 2 triangular arrowheads of quartzite. The hole had been filled to the general level with earth, a space 1 by 2 feet covered with an inch layer of cremated human bones and other bones, showing no trace of fire, deposited on them.

Toward the center, with only a few inches of earth intervening, was a similar excavation, the northern end opposite the middle of the first, which it duplicated in construction and contents, with the addition of 4 large columellas.

Just above and west of the stone pile began a bone-bed extending 14 feet from north to south and reaching to within 10 feet of the center. The deposit was irregular, the bottom varying a foot or more from a horizontal plane, not holding the same level more than a few inches at any part. In places the decayed bone formed a stratum 5 or 6 inches in thickness with scarcely any included earth; in others

it almost disappeared; while in one part there were several thin layers of bone interstratified with thicker layers of earth, making the deposit extend through a vertical space of 2 feet. One large and several small columellas and also a rude clay pipe were among the bones.

In the third zone, nearly north of the center, 2 feet above the bottom, was a long-stemmed steatite pipe; south of the center a grave 5 by 8 feet, the main axis east and west, extended through the 2 feet of sand sub-soil to the yellow clay beneath. The bottom was covered by a mass of charcoal and burned earth, on which the disarticulated skeletons of 3 or more individuals had been thrown at random after the fire had died down; burned and unburned fragments of bone were mingled, hence the cremation was not a part of the burial ceremony; no relics were with them, but in the earth just above were many fragments of an incised flat bone ornament. Over a small portion of the bottom was a stone pile which extended upward into the body of the mound; the sand excavated had been thrown back after the bones were interred. A little north of east from the center was a kettle-shape pit 5 feet in

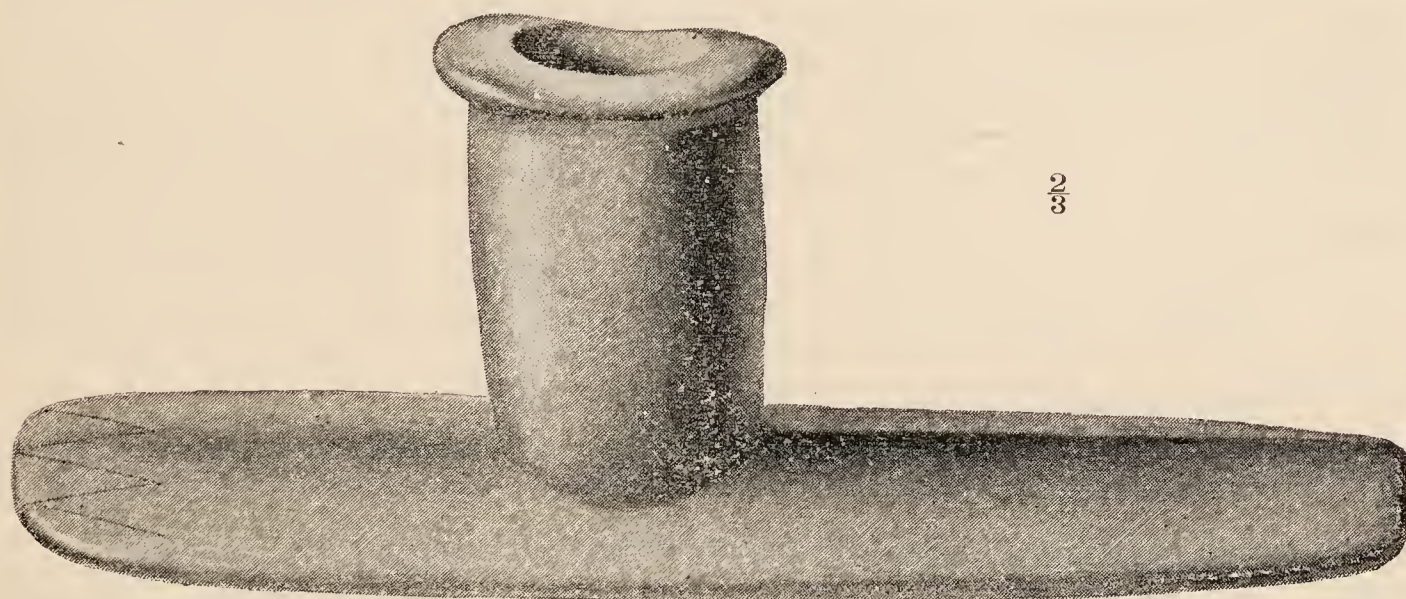


FIG. 14.—Pipe from Henry Brumback mound, Page county, Virginia.

diameter at the top and 2 feet deep. The bottom was lined with charcoal, some of the pieces being 6 inches in diameter. Another, north of this (a foot of solid earth separating them), was 3 feet in diameter and 8 inches deep, with the usual contents of charcoal and decayed bone. East of north of the center was a fourth pit, 6 feet in diameter and 30 inches deep, extending to the solid gravel. The bottom was covered with 6 inches of charcoal; scattered through this was nearly a cart load of burned stones, none of them weighing more than 8 or 10 pounds. A few fragments of bone and a steatite platform pipe (figure 14) lay at the bottom. The next stratum of 6 inches was of earth; then a space 8 by 2 feet, the main axis east and west, was covered with charcoal, in and on which were traces of bone. Whether the circular grave had been filled to a depth of only 12 inches and the second interments made at once, or whether it had been made level with the surface and another grave dug afterward, could not be determined.

West of these was a grave 3 feet in diameter and a foot deep. Southwest of this, or northwest of the center, was another, 6 by 2 feet, lying north and south, in which were 6 columellas close to a skull that had been partially burned, the teeth being completely calcined. Southwest of the center was a shallow grave 6 by 4 feet, extending northeast and southwest; the bottom was covered with charcoal intermingled with decayed bone. These 8 graves—or 7 separate pits—were thus made almost in a circle around the central part of the mound, but at varying distances from one another.

In the fourth zone, south of the center, several columellas, as well as a number of shell disk beads, were found at the original surface level; and 2 feet above them were still other columellas and a handful of shells of *Marginella* with the bones of a hand and wrist by a skull. All were soft from decay. Southeastward from the center a steatite bent tube pipe was found, but no human remains occurred near it.

Throughout this zone were beds of decayed bone, mostly at 1 foot and 3 feet above the bottom, though detached masses occurred at all levels; while small deposits of burned human bones, either with or without others showing no marks of heat, were frequent.

East and southeast of the center was a grave 8 by 4 feet, trending north and south, very irregular in depth and outline, extending in places to 30 inches below surface level. The bottom was covered with charcoal, burned stones, and traces of bone, among which were 8 small shark teeth, charred; with a skull at the margin nearest the center were an arrowhead and a flat pebble drilled for a gorget.

The removal of these four zones left a central area 10 feet in diameter. Near the center of this, on the southern side, among fragments of bone on and above the surface level, were 15 triangular arrowheads of quartz and quartzite, one of them stemmed, the only specimen of this kind found in the mound. A few inches south of these, and a foot higher, were numerous soft and broken columellas. Others were found at various places in the block, sometimes with decayed bone, sometimes alone, all traces of the bodies with which they had been interred having disappeared. Northeastward from the center were several pieces of a small but very thick pot.

Beneath this area were 3 graves, south, northwest, and northeast of the central point, each large enough to contain several bodies. They were irregular in outline and depth, extending in places to the compact gravel below. The bottom of each was covered with a layer of charcoal, which reached a few inches up the sides; on this were traces of decayed bone, but nothing else.

Throughout the mound were boulders, 2 or 3 in a place, laid on deposits of bones, though never in sufficient numbers to cover them. As a rule they were placed above the head. One, with a natural concavity, had been so placed as barely to touch a cranium, the edges of the stone resting on the earth all around it.

All the pits and graves appear to have been made with reference to a regular disposition around a given point.¹

All other mounds in this county in which specimens were found contained mica and gorgets, but no beads nor shells, while this yielded quantities of the latter, but not a flake of mica nor a gorget, except one rough stone whose only artificial feature was a rudely drilled hole.

CULLERS FARM.

On the summit of a hill on the farm of Lee Cullers, next west of the Brumback farm, is a small mound 18 by 28 feet, the longer axis nearly east and west, parallel with the ridge on which it stands.

Near the eastern end was a small pile of stones resting on the original surface, but nothing was found under them.

At the middle of the mound, stones extended to the bottom of a grave 5 by 2 feet and a foot deep, trending nearly southeast and north-

¹On April 21-23, 1894, this locality was further examined by Professor W. H. Holmes and W. J. McGee. About 100 yards northeast of the large mound, on the level alluvial bottom, a number of graves were found, roughly arranged in a line trending east and west. All were broken up by plowing to such an extent that the contents were fragmentary and indiscriminately intermingled. The graves were detected by the dark color, due to organic matter, in the freshly plowed surface. In all, fragments of human bones and potsherds were found; in some cases human teeth occurred, and in one instance the distal portion of the tibia of a deer was picked up. Charcoal was observed in several graves, but no calcined bones were seen.

The site is of exceptional interest as an illustration of aboriginal industry. Pass run, a good-sized mill stream, flows over a bed of small boulders and cobbles with smaller pebbles, consisting in part of an exceptionally hard and tough diabase, and in size and texture the diabase cobbles were admirably adapted to manufacture and use in primitive fashion. The extent of manufacture is indicated by numerous rejects representing all stages from that of a few trial or initial blows to nearly finished implements. These rejects are of special note in that nearly all represent the manufacture of broad-pointed implements—celts or axes—rather than sharp-pointed objects, such as those represented by the rejectage in the well-known localities on Piney branch and Delaware river. A nearly complete celt, showing the flaking by which it was wrought out of the original cobble, and ground only toward the edge, was among the objects picked up, and it was evidently the form which the primitive artisan had in mind in his work on the cobbles which resulted only in failures.

The source of the diabase cobbles was sought by following Pass run toward its source near the summit of the Blue ridge. Traced upstream, the fragments increase in size and number until, about the confluence of the branches as they emerge from the mountain gorges, the material was found to prevail, commonly in the form of huge boulders; and well within the gorges the rock was found in place as a great eruptive mass. In view of the rude appliances and purposes of the red men the site near the mouth of Pass run could not be better chosen by civilized intelligence. With primitive tools the hard, tough rock could not be quarried where it occurs in place; the great boulders of the upper reaches could not be reduced. A few hundred yards below the site, with the confluence of the larger Hawksbill creek and its inferior pebbles, the material is too sparse for profitable seeking. At the site only the toughest and hardest specimens have been preserved by the selection of stream work, and they are of fit size for convenient flaking and sufficiently numerous for easy finding.—W. J. MCGEE.

west. At the eastern end against the slope were a large unperforated gorget, some flint and quartz chips, and a long, slender flint flake. A foot from these 5 small plates of mica, a quartz blade, 5 roughly finished flint knives, and a shale gorget in fragments from weathering were found.

On the point between the Hawksbill and the Shenandoah there was formerly a small stone mound, but it is now entirely destroyed. Many relics have been found in the field in which it stood.

J. A. BRUMBACK FARM.

On the farm of J. A. Brumback, at Beyler ferry, is a small cairn almost effaced by cultivation.

ALGER FARM.

On the farm of A. J. Alger, 8 miles northwest of Luray, on a spur which extends from Massanutten mountain to the Shenandoah, is a mound 50 feet long and from 22 to 28 feet in breadth, the longer axis nearly northwest and southeast, or about parallel with the spur. The height varies from 4 to 5 feet. A broad shallow ditch extends nearly around it, the inner edge being 3 to 4 feet from the base of the mound. Excavation proved it to consist of two nearly circular earth mounds whose bases overlapped on the adjacent sides, the whole being covered with boulders to a depth of 1 to 2 feet. Thirteen feet inward from the southeastern end and 8 feet from the northern side was a grave large enough to contain an extended body. Two feet southwest of this was a pit 3 feet in diameter. From these to the southern edge of the mound extended a streak of burned earth and charcoal 6 to 10 feet in breadth, apparently the remains of a fire on the surface. Eighteen feet inward, 10 feet from the northern side, was a pit 5 feet in diameter containing a few fragments of soft bones, among which were the teeth of a child and an adult; also a broken flint spearhead. Twenty feet inward, 8 feet from the northern side, was a grave 5 feet long. Twenty-eight feet inward on the center line was a grave 4 by 1½ feet. All of these reached only to the hard subsoil, and in none of them, except as mentioned above, were found any relics or traces of bone. Forty feet inward, or 10 feet from the northwestern end, equidistant from the sides of the mound, was a grave nearly 7 feet long extending a foot into the hard gravelly clay, which is difficult to penetrate even with a pick. Much of the earth removed had been thrown back and mingled with cobblestones or boulders. Near the center were 2 small copper beads and a scrap of mica. At the northwestern end were an gorget-form piece of slate (not perforated), a gorget of green slate broken and redrilled, a piece of mica, a flint arrowhead, a quartzite knife, a piece of white quartz, and a piece of quartz crystal. Stones filled all the graves and were piled above them to the top of the mound. In several of the graves flat stones were inclined against the sides with one end in the bottom, as if poles or other supports had been

placed across to protect the bodies and had decayed, thus allowing the stones to fall in. This feature was observed in nearly every mound in the valley in which slabs were found.

RILEYVILLE.

On the farm of F. M. Huffman, a mile southwest of Rileyville, is a narrow ridge somewhat lower at the middle than at either end. In this slight depression is a mound 60 feet long, 20 to 24 feet wide, and 2 to 3 feet high, being lower and narrower at the middle than near the ends. The longer axis is nearly east and west or at a right angle to the ridge, extending across the latter to the slope on either side. There is a shallow ditch along each side of the mound and a stratum of boulders ranging from 10 to 50 pounds in weight covers the top. It will be observed that the method of construction is exactly the same as that of the Alger mound.

At the extreme western end was a grave 6 feet by 18 inches, dug nearly to the subsoil, partially refilled with earth, and then covered with a pile of boulders. This is unusual in such graves, as no others have been found in the valley in which the rocks did not extend to the bottom. A foot from the eastern end of the grave, just below the stones,

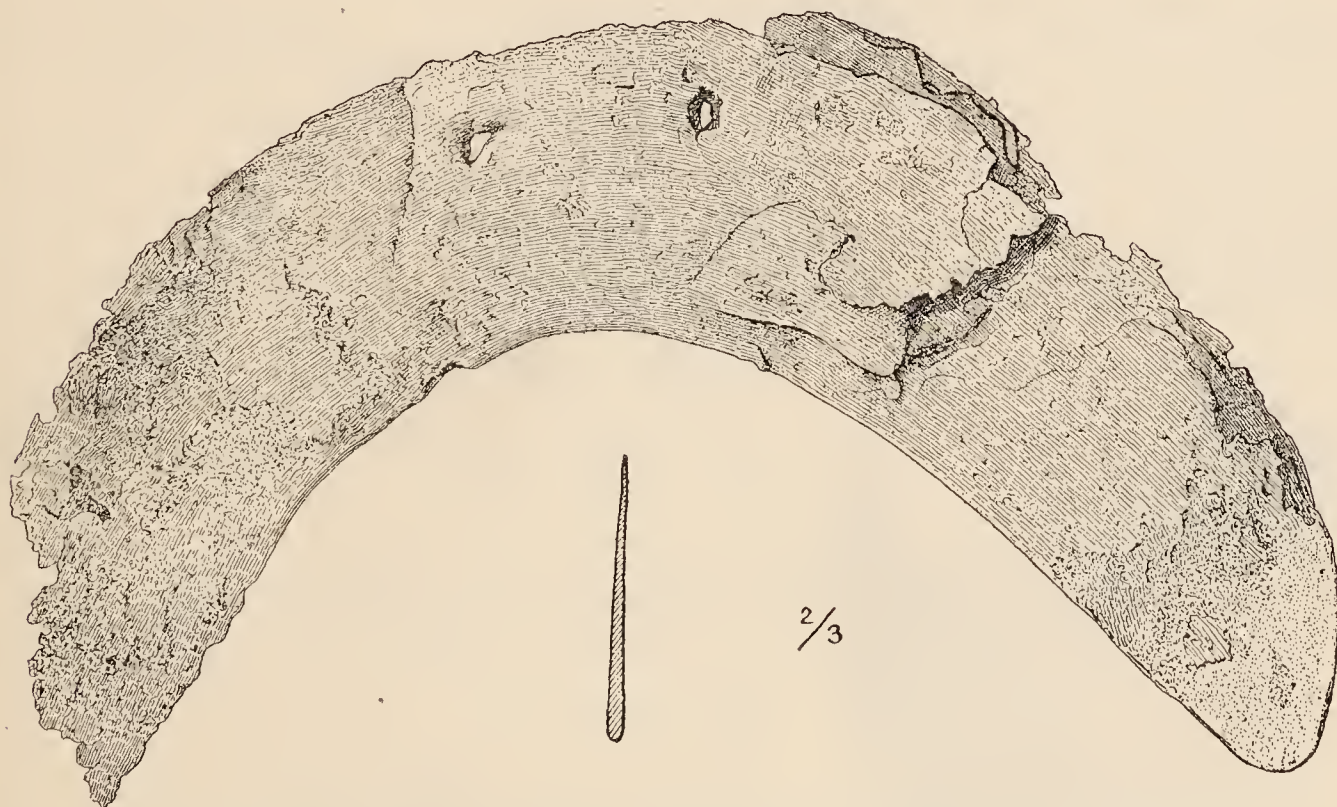


FIG. 15.—Copper crescent from F. M. Huffman mound, Page county, Virginia.

was a crescent of copper 6 inches across the horns, with 3 small holes punched near the convex edge (figure 15). Directly under this, with 6 inches of earth intervening, were 8 triangular black flint knives. Two feet from these, at a slightly lower level, was a double handful of quartzite chips and spalls.

At 14 feet from the end began a mass of stones covering a space 8 feet in diameter at the top of the mound and filling a grave 6 by 4 feet that reached a few inches into the soil. On the bottom, a few feet

from the eastern end, were two pieces of quartz crystal and a large rectangular gorget in which a hole had been started but not completed.

Midway between the extremities of the mound were 2 graves 3 by 5 feet extending slightly below the original surface, and 6 feet beyond these was another of the same size and general character, reaching to the subsoil.

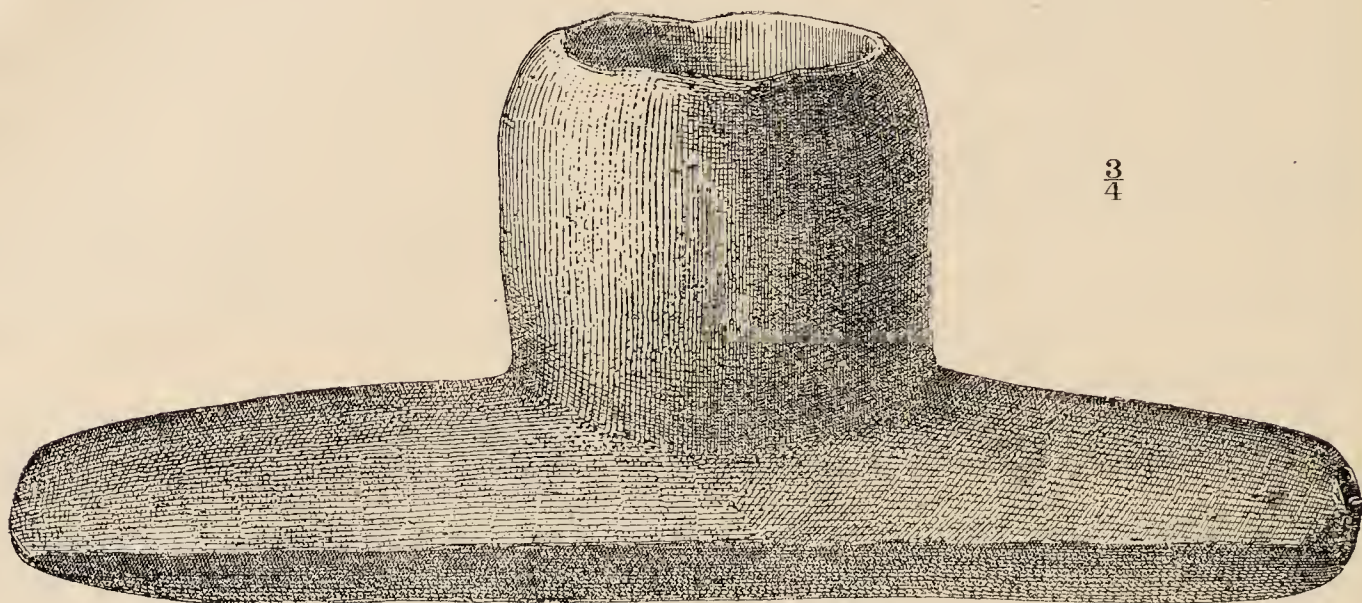


FIG. 16.—Pipe from F. M. Huffman mound, Page county, Virginia.

At 16 feet from the eastern end of the mound were 4 graves on a line nearly north and south. The northern one, near the edge of the mound, was quite shallow and 1 by 5 feet in extent. The next was the same length, but 6 inches wider. At its eastern end was some greasy, shining black substance mingled with the earth, in which was a rectangular gorget 2 by 5 inches with one hole. Near the middle was a

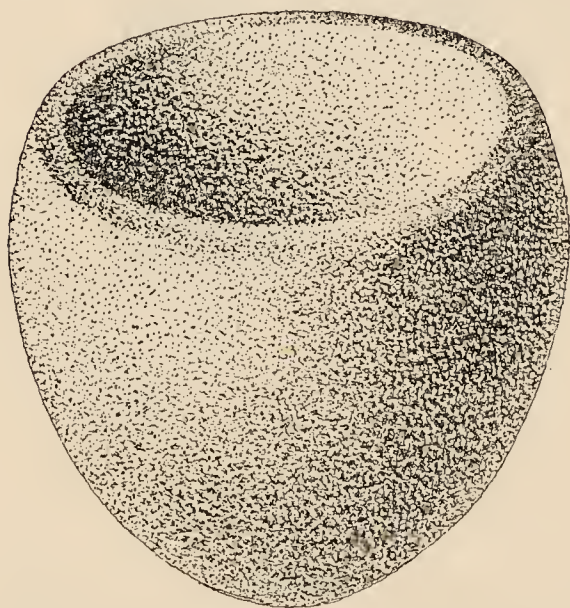


FIG. 17.—Paint cup from F. M. Huffman mound, Page county, Virginia.

smaller gorget of similar form with two holes. Against the northern side, opposite the center, was another, still smaller, with curved sides. Near the western end, 6 inches below the level of the first gorget found, was a large plate of mica, thus showing that the bottom of the grave had not been made level. A pine stump had been burned on the spot where it was dug. The charcoal and resin from the roots could be traced below and on either side of the excavation.

The third grave was 3 feet in diameter. At the center lay a finely finished platform pipe of bluish-gray sandstone, with the bowl upward (figure 16), and a paint cup or unfinished pipe of the same material (figure 17). The fourth grave, almost at the margin of the mound, measured 2 by 5 feet, and was dug to the subsoil. At the eastern end were a small gorget and a few scraps of mica.

Two feet east of the first of these graves, almost at the edge of the mound, was one 3 feet in diameter, reaching to the subsoil; and at the extreme eastern end of the mound was another not quite so deep, 4 feet in diameter.

In all cases the measurements given apply to the bottom of the grave, the top being larger, owing to the outward inclination of the sides, whose slope was not at all even or regular. No traces of bone were found in any of them. The longer graves lay parallel with the main axis of the mound, and the position of the relics indicates that the bodies had been placed in them with the heads toward the east. The clay below the thin coating of soil was of the consistency of putty.

Manifestly there were three periods of construction. At the eastern end 7 graves were covered by a mound about 24 feet in diameter; a few feet west of this a similar mound was made over 2 graves; then two additional graves were made in the narrow space between, sufficient stone and earth being piled above to give the appearance of a single mound, but not enough to make it symmetric in form. Each of the larger graves may have contained more than one body.

Fragments of mica, quantities of quartzite chips and spalls, and occasionally a knife or arrowhead were scattered through the earth of the mound. A piece of clay pipe was found near the top.

On the adjoining farm of J. R. Huffman, on a knoll somewhat higher than the ridge, is a small cairn now nearly destroyed.

KEYSER FARM.

On the farm of J. W. Keyser, three-fourths of a mile northwest of Rileyville, is a cave from which several human skulls have been obtained. In the débris near the mouth many fragmentary bones occur, and in a room about 30 feet farther back bones are resting on and imbedded in the stalagmite. Some entire skulls have been found in this room.

Systematic investigation is impossible until the opening to the cave is greatly enlarged and the accumulated matter cleaned out.

M. LONG FARM.

On the farm of Mrs Michael Long, $2\frac{1}{2}$ miles north of Rileyville, on a spur locally known as "Indian Grave ridge," are 2 stone mounds, both of which have been ravaged to such an extent as to render further examination useless. One is 70 feet in length with a breadth of 15 to 20 feet; the other is about 30 feet in diameter; each probably 3 or 4 feet high originally.

IDA.

On the farm of A. Shipe, near Ida, are 2 small mounds or boulder piles which have long been known as Indian graves; but they are on

the slope of the hill instead of on the top, and may have been heaped up when the land was cleared.

PRINTZ PLACE.

On John S. Printz's land, on Dry run, is a small stone heap from which, it is claimed, human bones and fragments of pottery have been taken; but it lies on the slope of the Blue ridge, fully 1,000 feet above the base, and a stream of water flows from beneath it.

KOONTZ PLACE.

Near the Gordonsville turnpike, a mile above Kite mills, at the foot of the Blue ridge, on the land of David Koontz, is a field where hundreds of arrowpoints and spearheads and many hoes and celts have been found. The ground is covered with chips and spalls, and it seems to be the site of an extensive factory. Quartz and quartzite boulders, and argillite in pieces that may be wrought into implements with but little labor, are abundant. The ground is too sterile for cultivation, and the nearest level land is fully a mile away.

A very small earth mound in which some fragments of mica were found, stood on a terrace between the two Hawksbill creeks, a mile and a half south of Luray.

SHENANDOAH COUNTY.

STRASBURG.

A little more than a mile south of Strasburg, on the land of O. S. Funk, is a mound 3 feet high and 30 feet in diameter. It stands near a bluff overlooking North fork of the Shenandoah, and is composed of earth and stone in about equal quantities, the latter, some of them weighing 200 pounds, being sandstone boulders from the surface and shale or limestone slabs from the bluff.

Three graves were found extending a little less than a foot into the compact clay soil, each about 6 feet long and 16 or 18 inches wide, lying northwest and southeast, and nearly equidistant from the center and from each other. In one, nothing was found; in another, decayed bone; in the third, traces of bone, a rude quartz knife, and a sheet of mica. The rocks piled over them had settled to the bottom of each.

On the opposite side of the river, south of this mound, is another 18 inches high and 20 feet in diameter, similar in construction except that it was built of shale slabs, there being no sandstone boulders near. It is on the northern end of a ridge in a sharp curve of the river, and covered two graves, the longer axis northwest and southeast as in the first. They were about 5 feet apart, the eastern end of the southern one opposite the middle of the northern one. No trace of bones was found.

Half a mile south of this mound, in a field that rises from the river in a gentle slope, is an area of about 2 acres, known as "Indian camp." The soil is black and very productive, but no pottery, burned stones, bones, or any other of the usual remains have ever been found.

In the bottom just below Mr Funk's house a flood some years ago washed off a considerable quantity of soil, disclosing several places where the earth over a space of 5 or 6 feet was very red, as if it had been burned. These were possibly the sites of fire beds, but no trace of them is now to be seen.

VICINITY OF NEWMARKET.

Near the mouth of Smith creek, 5 miles north of Newmarket, is a mound, now almost leveled by cultivation. Some human bones and a few relics have been dug or plowed out of it.

It was at this point that Peyton¹ and Kercheval² located the Senedo Indians. The latter says all the tribe, except two boys, were killed, and the mound, whose height he gives as 12 or 15 feet, contained the bodies of the slain, being "literally filled with human skeletons." But the author appears not to reflect that a mound of such height could scarcely be constructed by "two boys," or be so nearly obliterated by the plow.

On the adjoining farm, near the river, are 2 mounds. One has been opened and is reported to have contained an extended skeleton covered with flat stones. A grooved ax of about 3 pounds' weight, a leaf-shape quartzite knife 6 inches long, some arrowheads, and a black steatite platform pipe with a stem 3 inches wide, the cylindrical bowl 5 inches long and joining the stem at an angle of about 135°, are shown, which it is claimed were found with the skeleton.

A mound a mile north of town on ground overlooking the river, and another a mile southeast of town in a narrow bottom on the eastern side of Smith creek, have been completely destroyed. Some human bones have been exhumed in this bottom; it is not known whether they were of Indians.

WOODSTOCK.

A mile south of Woodstock, on the farm of E. M. Busheng, is a small mound on top of a ridge commanding an extensive view in every direction. It is now about 35 feet across and 18 inches high.

Fifteen feet northeast of the center on the original surface under a pile of limestone which had been carried from some ravine in the vicinity—there being none in place nearer than a quarter of a mile away—were some fragments of bones apparently of a person about 14 years of age. Two feet south of this, in the mound, were a few decayed bones belonging to another skeleton.

¹ Peyton, J. L., History of Augusta County, 1882, p. 6.

² Kercheval, S., History of the Valley, 1833, p. 50.

Fragments of bone were under a small heap of stones 4 feet southwest of the first; on the stones was the extended skeleton of an adult, apparently an intrusive burial; by its side lay a bone needle. Another intrusive burial was indicated by some fragments of bones a foot above the bottom and just south of the skeleton last mentioned.

Under the highest point of the mound was the southern margin of a burial pit 16 inches in depth. It had first been dug in circular form with a diameter of 5 feet; afterward it had been extended toward the west, making a pear-shape cavity 7 feet in length. In this were portions of 15 skulls. In two places were a few teeth which may have belonged to some of these skulls or to others which had entirely disappeared. The clay was very wet and of wax-like consistency; consequently the bones could not be taken out except in small fragments almost as soft as the mud. They were mingled in confusion, showing skeleton burials. Several of the skulls were very thin; in at least 2 of them the teeth were very small and not at all worn, while in some the teeth were worn to the necks.

A fine perforated gorget, a bear tusk with the root half ground away, and a minute quantity of wad were the only relics in the grave, although a soft slate gorget with two perforations was found on the surface above it. The pit was filled with 8 or 10 wagon loads of limestone slabs, each from 10 to 100 pounds in weight, which extended beyond its limits on every side and reached the top of the mound.

Four feet south of the grave were a few bones a foot above the original surface; and 4 feet farther was another stone pile that probably had covered a skeleton though no bones were found under it.

Near the southern edge of the mound was another skeleton protected by a small pile of stones.

It is probable that a mound 15 to 18 feet across and about 3 feet high was first built over the large grave; and that afterward the other skeletons were interred, perhaps at various times, the earth and stones thrown over them destroying the symmetry of the mound and changing the position of its summit.

At Dr Riddel's, 4 miles above the town, on the opposite side of the river, is a place possessing all the features that would fulfill the requirements of an Indian village; and many burned stones, unfinished implements, fire beds, and small areas of black earth are found.

A trail from South branch, across North mountain, passed over Fort mountain (Massanutten), near Woodstock, into Page valley.¹ It probably led to the country east of the Blue ridge.

WARREN COUNTY.

A number of small mounds or cairns formerly existed in Warren county, but nearly all have been destroyed and scarcely a trace of them now remains. Four of the mounds were on the hill back of Front

¹ Kercheval, History of the Valley, p. 51.

Royal, near the college building, and 2 others were situated on the point opposite the junction of the two Happy creeks.

Seven miles above Front Royal, on the farm of Captain Simpson, opposite Gooney run, were 4 cairns, one of them 20 by 20 feet, the others much smaller.

There were several cairns on the farm of Dr Haynie, 9 miles below Front Royal; many relics, mainly arrowpoints and spearheads, are found in the bottom lands near by. Kercheval mentions the location of an Indian town at this point.

Two mounds were opened near Water Lick; in one of them were found a stone hatchet and part of a gun barrel.

On the Jenkins farm, near Buckton, is a mound 28 feet in diameter and 2 feet high; it has been partially opened without results.

On the Catlett place, adjoining the above, were 4 mounds, of which one has been entirely destroyed. The largest was 20 feet in diameter and 30 inches high. It covered 2 graves, about 3 feet apart, extending a few inches into the tenacious clay subsoil and filled with large stones which had settled in from the mound. One was nearly 6 feet long and about 20 inches wide; the other was circular, $3\frac{1}{2}$ feet in diameter. No traces of bone remained in either. A foot from the top of the mound were the fragmentary bones of 2 adults and a child of 12 or 14 years, much broken and decayed but in proper order; they had been interred in a shallow hole made by the removal of the stones, which were then thrown back on them. The 2 other mounds were much smaller; under each was a circular grave $3\frac{1}{2}$ feet in diameter, extending a few inches into the subsoil. No bones or art products were found in either.

A mound at the highest point on the road leading through Cullers gap to Seven Fountains in Fort valley, if not due to natural causes, is only a trail mark, as this pass was much traversed by the Indians.

The Indian trail through Chester gap divided at Front Royal, one branch joining the main trail up the valley, a few miles north of Winchester,¹ the other following the Shenandoah. The two main streets of the town are laid out along the line of these trails; this explains the sharp angle at which they separate.

Tradition also locates the Senedo Indians at the junction of the two branches of the Shenandoah and along Happy creek.

CLARKE COUNTY.

VICINITY OF BERRYVILLE.

Five miles south of Berryville, on the farm of S. M. Taylor, at the end of a low ridge, bounded by the river and a small creek, are abundant surface indications of an aboriginal settlement.

Four folded skeletons were found not more than a foot below the surface, one on the right side, with head toward the east; the position of

¹ Kercheval, History of the Valley, 1833, p. 51.

the others could not be determined. Another, lying on the left side, the head toward the south, was in a grave 3 feet deep, the end of which was at the side of a barbecue hole.

A burial pit 4 feet in diameter and 3 feet deep, 15 feet from the nearest grave, contained remains of 3 persons. At one side were piled in confusion the bones of a child about 14 years of age; opposite them lay the pelvic bones of an adult. The bones of an infant lay in their proper order, on the right side, the head toward the east; at the neck was a shell disk with a single perforation.

More than 20 barbecue holes were found which had apparently been cleaned out before being abandoned, and had refilled; for, although the bottom was much burned, they were almost devoid of the remains usually found in such holes except that in one was a quantity of burned stones. They were filled with earth having exactly the same appearance as the soil about and between them; pieces of charcoal, none larger than a hazelnut, occasionally a mussel shell or small burned stone, or a fragment of pottery being scattered here and there. Most of the holes were circular in outline, measuring from $3\frac{1}{2}$ to 5 feet in diameter at the top and a little more than half as much at the bottom. Several were quite irregular as if dug at different periods. One was 15 feet long, a foot deep at one end, 3 feet deep at the other, and from 3 to 5 feet wide, the bottom not having a uniform slope but being quite uneven. It contained very few animal bones, shells, or such remains, but small lumps of charcoal were scattered thickly in the earth filling it. Parts of the skull of an infant, with arm and leg bones of 2 others were found; the femurs were not more than 4 inches long and the skull was as thin as heavy wrapping paper.

There were several large piles of mussel shells in various places; one covered the grave of an adult, but this did not seem to have been intentional.

On the land of John F. Alexander, lying next south of the Bowman farm are 2 stone mounds, one of them about 2, the other about 3 feet high, the diameter of each being about 20 feet. One is on top of a hill, the other about 40 feet above the bottom land on a point terminating a ridge. Both have been opened, and human bones but no other relics found in them.

WHITEPOST.

On the farm of Mr M. H. Reardon, 2 miles northwest of Whitepost, was a stone mound or grave that was carefully examined by that gentleman. The rocks surrounding it were all large, with one end set in the ground, the other inclining inward. Several circles were thus formed, each supported by the next inner one, the last being upheld by small stones laid under it. Similar rows above were held in place by having the lower end of each stone wedged between stones in the next lower course; others were fixed upon these, and so on until the

uppermost stones came together above the middle of the grave, forming an arch. Several wagon loads of loose stones were then thrown on, making a mound more than 4 feet high and 30 feet in diameter. In the vault were not less than 20 extended skeletons of adults, the skulls all toward the west, laid as closely together as they could be placed on the ground and exposed rock which formed the natural surface. The small amount of earth within the grave was very black and loose. A quantity of bone and shell beads sufficient to fill a cigar-box was found among them.

This description exactly corresponds with that of a grave near Ripley, Ohio, except that the latter contained fewer skeletons.

Half a mile southeast of the above mound was another, also of stone, in which were several skeletons, with arrowpoints and spearheads and celts. It was noticed at the time that while one mound contained no relics but beads, only weapons were found in the other.

WASHINGTON COUNTY, MARYLAND.

A mound and a cemetery were removed near dam number 4, in digging the Chesapeake and Ohio canal. Two small mounds stood near the Miller sawmill, 3 miles below Sharpsburg, at the mouth of Antietam creek; human bones also were found there in excavating for the canal. Another was near the river, 2 miles west of Sharpsburg. All these have been opened; they were of stone and quite small; pipes, pottery fragments, and bone ornaments or implements were found in them.

There is a burial cave on S. S. Stauffer's land, 2 miles south of Sharpsburg, in a bluff that overlooks Antietam creek, and about 40 feet above the level of that stream. The opening is not sufficiently large to allow a man to enter upright, and the cave is only a few yards in extent in any direction. Human bones and some relics, including a pipe, have been found in it, under flat stones which lie only a few inches below the surface; some of the bones were calcined. The earth below them has not been disturbed, and its depth is not known.

At the mouth of the Conococheague, on the upper side, is a village site where bones, pottery, and other relics, including an unfinished steatite pipe of very modern North Carolina type, have been found, with great quantities of chips and spalls; it extends along the river bank for more than 300 yards. Half a mile farther up the river, on a bluff, was a small cairn which upon examination yielded human bones and a few relics.

A mile west of Hagerstown is a flat rock near a large spring; tradition says it was an Indian council place. Quantities of worked flint, chips, spalls, and some finished implements were formerly found on and about the rock; it was probably an arrowhead factory.

Two miles above Hancock, on the Bowles farm, is a large spring at the foot of the hill. It was formerly a camping place of the Indians.

At various points on the hillside above the spring, in crevices formed by unequal erosion of the nearly vertical strata, human bones have been found on the natural surface, covered with large stones sometimes to the amount of several wagon loads.

Cairns are reported on the farms of Thomas Smith, near the Bowles place, and Frank Shive, on Timber ridge, 4 miles north of Hancock.

JEFFERSON COUNTY, WEST VIRGINIA.

Stone mounds or cairns, from 12 to 30 feet in diameter and less than 3 feet high, have been located as follows: One near the cement mill, a mile below Shepherdstown; 2 on Jacob McQuilken's farm, 6 miles above Shepherdstown; and another on Harrison's farm, adjoining the last. All have been opened, human bones and a few relics being found in them. It could not be learned at what depth they were placed; the excavations seemed to extend somewhat lower than the outside level.

ALLEGANY COUNTY, MARYLAND.

Several small cairns on a hill above the river, on the Cresap farm, at Oldtown, were hauled away many years ago. Bones in a fair state of preservation and some relics, among them a very fine pipe, were found.

There is a village site near Eilerslie, and one at James Pollock's place, on the river, 2 miles above North Branch station; there is also a mound at the latter place, now almost destroyed. Other mounds have existed in various parts of the county, but none remain intact, unless in the vicinity of Flintstone.

A trail down Wills creek, through Cumberland, led to the Wappatomaka (South branch) valley.¹

HAMPSHIRE COUNTY, WEST VIRGINIA.

The largest mound in Hampshire county is in the cemetery at Romney; it measures 35 by 40 feet (the longer axis trending nearly east and west,) and is nearly 5 feet high, being made of stone and earth in about equal proportions.

Two mounds on the Parson farm, a mile north of Romney, one 35 feet in diameter and 2½ feet high, the other somewhat smaller, have been thoroughly examined and reported to contain nothing.

Two mounds, mostly of earth, are on the farm of Joseph Wirgman, a mile south of Romney. In one, about 25 feet in diameter, a small pot was found entire. The other is 22 by 34 feet and 2 feet high, the longer axis east and west. It covered a grave larger than any other that has been disclosed in this region, being 7 by 8 feet, not regular in outline, and extending 18 inches to the hard-packed, disintegrated shale that could scarcely be dug with a pick. It had been refilled with earth to the depth of a foot, and then large stones, some

¹ Kercheval, History of the Valley, 1833, p. 51.

of them as heavy as a man could lift, piled on until they reached slightly beyond the margin of the grave on every side and to the top of the mound as it now exists. No relics were found in it.

A small cairn stood half a mile south of the cemetery on the same level as those just described.

On the bottom lands, between the cemetery and the bridge, many village site relics as well as human bones have been picked up after floods, or when the ground was freshly plowed.

In making excavations for the railway along the foot of Hanging rock, 4 miles below Romney, many human bones were unearthed. Such quantities of stone have fallen from the cliff above, however, that it is impossible to ascertain whether there was a mound. According to tradition a great battle was here waged between the Catawba and the Delaware. The same claim is made for various points on the Potomac from the mouth of Antietam creek almost to Cumberland, and along South branch from its source to its mouth;¹ in every locality, in fact, where a few skeletons have been found.

An extensive village and cemetery site exists on the Herriott farm, opposite and below Hanging rock. Fireplaces are numerous and many skeletons have been exhumed. Besides the ordinary Indian relics are found iron hatchets, glass beads, and ornaments of brass. An Indian town stood at this point when the whites first came into the valley, and the natives continued to occupy it for a number of years after the early settlers had taken up land, as shown by the character of some of the relics found. Persons well versed in the history of the region assert that the Indians occupying this town were a branch of the Seneca.

There were formerly many stone mounds along the foot of the hill back of this village, but all of them have now been removed. Some of them were along the hillside a few feet above the margin of the level bottom; others were on the level, but nowhere more than 50 or 60 feet from the foot of the hill. They varied in height from 2 to 8 feet, in diameter from 12 or 15 to 40 or 50 feet, and were composed entirely of stone. All except the smallest ones had a depression at the top as if they had contained a vault or pen of logs whose decay had allowed the rocks to settle. Fragmentary bones were found in many of them lying on the original surface. Very few art relics were found. In one was a pipe with a wolf head carved on it. A cairn on the hillside near the schoolhouse on the Herriott farm contained some decayed bones.

On the western slope of Mill Creek mountain, on the farm of William Hamilton, directly west of Romney, is the site of an arrowhead factory. Flint is abundant along the mountain side, and was carried to a knoll near the foot of the slope to be worked.

Three considerable village sites are located above Romney. One is on Murphy's farm, 9 miles from town; a second on John Pancake's

¹ Kercheval, History of the Valley, 1833, pp. 47-50.

place, 2 miles below the former. Both are on the right bank. The third is on the left bank, at what is known as Pancake island. Many fireplaces and graves have been examined. In them arrowheads, bone fish-hooks, celts, pipes (including many of the platform type), iron hatchets, brass ornaments, and glass beads (among the latter some of the Venetian polychrome variety) were found intermingled. Pottery fragments are abundant and of two distinct kinds; one, thin, smooth, well worked, of nearly pure clay, kneaded or paddled as compactly as possible, the other formed of pounded flint and quartz mixed with shale from the hill crushed like the other ingredients, pieces as large as a grain of wheat being common.

On Joseph A. Pancake's place, at the mouth of Trout or Mill run, 4 miles above Romney, are 2 stone mounds, one of which has been nearly leveled. It contained some relics, among them a celt and a steatite pipe with a hawk head carved on it. The other mound was formerly 3 feet above the surrounding level, but the soil had been washed away from around it by freshets until its top is 6 feet above the present surface. It is now on the river bank, but the terrace formerly extended fully 100 yards farther than at present. At the center was a grave dug to the underlying gravel, at this point only a few inches below the old surface, and filled with flat stones, some of them 200 pounds in weight. They were inclined at various angles as if they had been placed over a pen or other covering for the body. Nothing in the way of relics was found.

"Indian rock," 3 miles above the mouth of South branch, takes its name from an incised image, supposed to represent an Indian, carved on the protected portion of an overhanging rock. The lines are filled with a red substance which persons have tried unsuccessfully to remove. Of course "a great battle" is reported to account for it.

On a point overlooking Cacapon river, half a mile north of the Hardy county line, on the Rudolph farm, are 3 or 4 small cairns, one of which has been opened and found to contain bones tolerably well preserved.

A small cairn on a hilltop just above the residence of Captain Pugh, $4\frac{1}{2}$ miles south of Cacapon bridge, has also been opened; and two others on the opposite side of the river, half a mile farther down, have been removed. Nothing of note was found in any of them.

An undisturbed cairn stands on a narrow ridge just west of Cacapon bridge.

MINERAL COUNTY, WEST VIRGINIA.

Many stone graves have been opened along Patterson creek, but no record was made of their appearance or contents.

GRANT COUNTY, WEST VIRGINIA.

Small stone mounds are to be found in the vicinity of Maysville. It is reported that in a mound (whether of earth or stone could not be

ascertained) in the valley between New creek and Alleghany mountains, a very small, soft, steatite platform pipe, decorated with incised straight and zigzag lines, was found.

On the eastern edge of the town of Petersburg was a small earth mound, now entirely destroyed. No one could remember whether anything had been found in it, but flint implements are abundant about its site.

At the opposite end of the town a mound of earth and stone formerly stood, but it has long since been leveled. It is said to have contained a black steatite platform pipe, many flints, and some other relics whose character could not be learned.

On a high point 2 miles south of Petersburg are two small cairns, both of which have been opened.

Half a mile north of the town, on a hill, is an undisturbed mound of earth and stone, about 40 feet in diameter and 4 feet high; and near it the remains of a stone mound about 30 feet in diameter, now mostly hauled away.

On the Cunningham place, in the river bottom, a mile below Petersburg, was an earth mound, but it has been destroyed by years of cultivation and no record of the contents is now obtainable from the residents of the neighborhood.

There is a cairn on the Stump farm, 5 miles south of Petersburg, and a mile east of the turnpike.

"Indian-house cave," about 10 miles above Petersburg, on the right side of South branch, takes its name from a tradition that it was an Indian dwelling place. As the floor is of solid stone over nearly its entire extent, there is no means of verifying or disproving the account.

HARDY COUNTY, WEST VIRGINIA.

"Old Fields" takes its name from the fact that when the earliest white explorers entered the valley there was a clearing on the left bank of South branch, just above the "Trough," at what is known as the "Neck," on the McNeill place. A fort was established here and many battles took place between the whites and the Indians. On the mountain near the upper end of the "Trough" human bones covered with stones have been found in crevices formed by erosion of the upturned strata; while on "Indian Grave ridge," $3\frac{1}{2}$ miles east of "Old Fields," was a cairn, and on the mountain, a mile farther southward, there were 2 or 3 others, supposed to contain the remains of Indians slain in early border warfare. None of these cairns are more than 12 or 15 feet in diameter, and to explorers they have yielded nothing except a few bone fragments.

On the Cunningham farm, next south of "Old Fields," on a level terrace 40 feet above the river, are 2 mounds, one 35 feet in diameter and 2 feet high, the other 20 feet in diameter and 18 inches high. The central portion in each is stone, the remainder earth. A short distance

away are 2 others, on a ridge 100 feet above the terrace. They are of earth and stone in about equal proportions; the smaller is 20 feet in diameter and 18 inches high, the larger 32 by 50 feet, with the longer axis east and west, and 30 inches high. This was removed and found to cover 6 graves, none of them more than 3 feet in diameter; one extended 16 inches below the original surface, none of the others being more than a foot deep. The stones reached to the bottom in every one, some being inclined against the sides. No traces of human bones were found; indeed the only relics observable were a few flint chips scattered throughout the earth.

A small cairn has been removed from the first terrace near the river bluff on the McNeill farm.

On Thompson Parson's farm, 8 miles above Moorfield, on South fork, was a cairn 18 feet in diameter and 2 feet high, on a hillside 100 feet above the river. Nothing was found in it, although stone implements have been found in the bottom lands below.

On Duidy's farm, two miles below Parson's, on a point 50 feet above the river, are 2 mounds of stone, one 15 feet in diameter and 18 inches high, the other 30 feet in diameter and 2 feet high, united at the base. They have been opened, but the result could not be learned.

On Welton's farm, 8 miles south of Moorfield, on the left side of South branch, were 3 small cairns; all have been opened, but contained nothing of archeologic interest.

A mound of earth and stone, 25 feet in diameter and 3 feet high, on William Baker's farm, 6 miles above Moorfield, on South branch, has never been opened.

On Jesse Fisher's farm, on South branch, 7 miles above Moorfield, were 3 mounds, one of which had been partly, and another entirely, removed. The third, 25 feet in diameter and 3 feet high, has been partially opened, and it is reported that some flints were found in it. Removal of nearly the entire structure showed that it covered a single grave a foot deep, the earth from which had been thrown out on every side. In the bottom were a plate of mica, 3 roughly worked arrowheads, a piece of quartz crystal, some flint flakes, a piece of slate with 3 shallow depressions on one side (probably a polisher), and a small quantity of black substance, probably graphite, intermingled with the earth, which, when rubbed on a smooth surface, exactly resembles ordinary stove polish.

There is a cairn on the Randolph place, near the junction of South branch and South fork; another on the Newman place, 2 miles south of Moorfield, and two others may be seen on the Inkermann farm, in the vicinity of the latter.

Four miles south of Moorfield, on Jesse Fisher's farm, were 4 mounds, one of which had been removed; another, 20 feet in diameter and 2 feet high, was not opened. The third, 25 feet across and a foot high, covered a single grave reaching 6 inches into the original

soil; the stones formed a solid mass to the bottom over a space 5 feet in diameter. A slate gorget with 2 perforations was found among these stones, but there was nothing beneath them. These 3 mounds were entirely of stone, except such earth as had accumulated on them. The fourth mound, 30 feet in diameter and 3 feet high, was composed equally of earth and stone. Near the eastern side was a grave 2 by 6 feet, a foot deep, filled with boulders, but without relics or traces of bone. Six feet northeast of the center lay a slate gorget and a number of small flint chips. Ten feet south of the center, heaped promiscuously together, were a slate gorget, 25 triangular knives of black flint, 15 quartz crystals, 2 plates of mica, a few chips and spalls, a paint cup or pipe like that shown in figure 17, and a pint or more of the same black substance noted above. Eight feet southwest of the center were 14 black flint knives and arrowheads and a shale gorget. All these objects were on the original surface. In a number of places compact masses of stone reached to this level; one of these was almost at the western edge. Nothing was found under them; if they marked the position of graves there was no other evidence of the fact. A cup-stone, about 5 pounds in weight and containing several depressions, was one of the stones forming the mound. Flint chips, a few arrowheads, and a piece of iron ore were found loose in the earth.

There is a large stone mound on the farm of George McAllister, on Lost river, 2 miles above Mathias.

A mound mostly or entirely of earth is located near Fort Seybert, on South fork, about 21 miles from Moorfield. A pioneer fort stood here, which was several times attacked by the Indians and once, in 1758, captured by them. This mound, which is now scarcely discernible, is supposed to be the burial place of the slain. Many bones in a fair state of preservation have been exhumed. Another mound which stood near here yielded bones said to be much smaller than those from the one just mentioned.

Near the Hampshire county line, on a small ridge or level formed by Frye's run, on the right side of the Cacapon river, are 3 cairns; and in the river bottom, a mile from the mouth of this run, is another. All have been opened, but nothing was found in them.

PENDLETON COUNTY, WEST VIRGINIA.

On the farm of John H. Harmon, at Upper Tract, near the river bluff, on the first terrace, were 2 stone mounds. Chips and spalls are abundant along this terrace and many flint implements, including some scrapers, have been picked up. On the same farm, on the upper terrace, are 4 mounds. One of earth and stone resembles somewhat a pear cut in two lengthwise, the smaller end being toward the east; the larger portion is 30 feet in diameter and 4 feet high, the smaller part 20 feet wide and 18 inches high, extending 25 feet toward the east. Another mound is similar in form but is somewhat smaller. A third

mound, 15 feet in diameter and 3 feet high, is entirely of stone; this covered a single grave in which nothing was found. The fourth mound is also irregular in form; apparently 2 mounds, each about 20 by 25 feet and 18 inches high, have been built end to end, in such a way that a line connecting their centers would fall near one side at their junction.

There is an earth mound at the mouth of Seneca creek, in fertile, sandy bottom land, from which many well-preserved human bones have been taken. It is reported that they were buried extended under flat stones.

A small cairn stands at Riddle's store, 6 miles above Upper Tract, and another at Jacob Hammer's, 3 miles above the latter.

An earth mound, now destroyed, stood at McCoy's mills, $2\frac{1}{2}$ miles above Franklin, at the mouth of Blackthorn creek.

Various places have been reported as the sites of Indian quarries or workshops for the manufacture of arrowpoints and spearheads; also caves which are said to show traces of human occupancy; they present nothing not due to natural causes. As the rocks in this region belong to the Devonian system, caves are frequent, though mostly small, and hornstone or chert is very abundant. The weathering of the limestone has released the latter in blocks and nodules to such an extent that in many places the surface is completely covered with their fragments.

CONCLUSIONS.

The data obtained by the investigations described in the foregoing pages, and the results of previous explorations so far as can be judged by the published accounts, justify the belief that the aboriginal remains between tidewater and the Alleghanies, from Pennsylvania to southwestern Virginia, pertain to the tribes who lived or hunted within this area at the beginning of the seventeenth century. If a more ancient population existed, all traces of it have been obliterated or else bear such a resemblance to those of a later period that differentiation is at present impossible.

In the various cemeteries, so far as examined, there is nothing in the methods of burial or the character of attendant works of art that may not be more rationally explained by the known customs in vogue among the Indians of this region than by any arbitrary division into conjectural periods of time or stages of culture. The occurrence of objects which could have been obtained only from white traders fixes approximately the date of some burial places; others in which these evidences are lacking show such resemblance to the first in construction, and such similarity in specimens due to aboriginal handiwork, that any attempted separation of them that involves the supposition of a different age or dissimilar people appears to be without sufficient warrant.

The same is equally true in regard to the mounds. Even if we omit the statement of Jefferson that the one opened by him was visited by a traveling band of Indians, their contents prove them to be ossuaries formed by depositing at intervals, probably irregularly, the remains

of those whose bones had been collected since the last previous general burial. This, as we know from various authorities, was customary with many tribes both north and south. Jefferson¹ tells us that at a treaty held with the Six Nations at Lancaster, Pennsylvania, one of the Indians died and was buried near the town. Afterward a party came, took up the body, cleaned off such flesh as remained by boiling and scraping, and carried the bones home. As the Tuskarora (or Monacan) were one of the Six Nations, and as the Powhatan also preserved the bones of their dead, while the Manahoac,¹ being neighbors to both, might be expected to have similar customs, it is quite probable that such remains in the Piedmont region are due to the tribes occupying that territory within the last three centuries. A similar assertion can safely be made concerning the country beyond the Blue ridge. The earth mounds are constructed in practically the same way; the small cairns, containing in most cases only a single skeleton and never more than two or three, are doubtless the graves of such hunters or warriors as perished on their periodical raids or hunting expeditions; the larger cairns seem to have been constructed hastily and without much care. The finding of the fragment of a gun barrel at Water lick proves a modern origin for at least one of them, and all are quite similar in their construction to the graves which students generally agree were made by different tribes who have roamed through this country within the historical period.

Following is a list of all the known tribes residing in or resorting to the valley in 1716-1732, taken from Peyton's History of Augusta County:

Shawnee, whose principal villages east of the Alleghanies were near the present town of Winchester.

Tuskarora, near Martinsburg.

Senedó, who occupied the north fork of the Shenandoah until 1732 when they were exterminated by hostile tribes from the south.

Catawba, from South Carolina.

Delaware, from the Susquehanna.

Susquehanna, or Susquehanough, who were driven from the head of Chesapeake bay and settled on the headwaters of the Potomac.

Cinela, on the upper Potomac.

Piscataway, or Pascataway, from the head of Chesapeake bay.

Six Nations.

Cherokee.

Kercheval, in his History of the Valley, says that "Shawnee cabins" and "Shawnee springs," near Winchester, received their names from settlements of this tribe, who had, besides, a considerable village at Babb marsh, 3 or 4 miles northwest of Winchester, where signs of their wigwams were visible years after the country was settled. He also says the Tuskarora were living on the creek of that name after the whites came into the country.

¹Notes on Virginia, p. 353.

These various tribes hunted and fought over all this region. Each year, before going into winter quarters, they set fire to the dry grass in order to prevent timber from growing and thus diminishing the area of their hunting grounds. For this reason the country was almost devoid of trees, except along the streams and to some extent in the mountains, the forests which now exist having sprung up since Spotswood's day.

In 1744 one of the chiefs of the Six Nations, at the treaty of Lancaster, Pennsylvania, claimed that all the country west of the Blue ridge belonged to his people by right of conquest, and a clear title to it could only be obtained from them.¹ How long they may have been in possession of it is not known. Colden² states that they formerly lived near the present site of Montreal, whence they were driven by the Adirondack Indians shortly before the French settled in Canada in 1603, and settled where they were found by the whites, and that they did not extend their conquests into the south till furnished with firearms by the English; but Smith records that he saw several canoes full of them in Chesapeake bay in 1608, and that they were then known and feared by all the eastern Indians. He speaks of procuring from them arrows, shields, etc., but makes no mention of firearms or other weapons that they could have obtained from the whites, which is very good evidence they did not possess them at that time. By the seaboard Indians they were called "Massawomec," but are better known by the various names of Mingo, Mengwe, Iroquois, Maqua, and Five Nations, or, after the admission of the Tuskarora, Six Nations.³

Besides the aboriginal villages above mentioned, a number of Shawnee had settlements along South branch until the whites became numerous enough to drive them out; the villages above Romney may have belonged to them. At the same period the Delaware were represented by a branch upon the Cacapon; while the Seneca had a village opposite Hanging rock, and another at the mouth of Seneca creek, which takes its name from that fact. It is not known to what nation or tribe the Senedo belonged, as there is no reference to them in the older books; it is possible that the name was invented to account for the term Shenandoah, which is popularly derived from them and interpreted "Sparkling daughter of the shining stars." On the earliest deeds it is spelled "Gerando," and by successive orthographic changes has reached its present form. It is really a corruption of the Iroquoian word "Tyonondoa," meaning literally "there it has a large (high) mountain;" that is, "in that place there is a high range of mountains." On some old maps the name "The Endless Mountains" is given to some of the ranges of Pennsylvania and Virginia, probably an attempted translation of the above meaning; the descriptive portion of the word

¹ Minutes of the Provincial Council of Pennsylvania, vol. iv, p. 512.

² Colden C., History of the Five Nations, 1747, p. 23.

³ Jefferson, Notes, p. 350; Craig, N. B., Olden Time, 1876, vol. i, p. 4.

refers to the elevation instead of to the length of the chain. These romantic but incorrect translations of Indian words are common. For example, "Kentucky," which is nearly always interpreted "Dark and bloody ground," is almost certainly derived from an Iroquoian word conveying the idea "a place where the grazing is good"—at least, the word having that meaning is almost identical in sound with "Kentucky," while there is no Indian word with anything like the popular meaning that bears the slightest resemblance to it.¹

The Alleghany mountains, in this part of the range at any rate, seem to have been a dividing line between the eastern and the western Indians. South branch and Shenandoah valleys were the great thoroughfares within modern times, and may long have been so, between the north and south, for the one while the others followed Tygart Valley and New river.

There is nowhere any evidence of an ancient or long-continued occupancy of this region by the Indians; on the contrary, the archeologic discoveries are in accord with the historical and traditional statements that more than one stock or people were in the habit of resorting to this country. The village sites, as would be expected, are along the principal watercourses, in fertile bottoms easily tilled, and the cemeteries are at the same spots. The stone mounds, on the contrary, are scattered at random, with no other apparent object in their location than the selection of a commanding outlook. It is not to be supposed that any people would carry their dead to an inconvenient spot and bury them in a manner so different from that in which most of their interments were made. There is not, however, sufficient diversity in these graves to permit a classification that would attribute particular forms to certain tribes.

It is worthy of note that many of the pipes and most of the gorgets found in this section, whether in the earth or stone mounds, very closely resemble in style, finish, and material those considered typical of the mound-building tribes of Ohio. It would be of interest to know whether this coincidence is accidental, or whether it may result from communication between the different peoples. If the latter, it would have the effect of reducing considerably the length of time that is generally supposed to have elapsed since the construction of the western mounds.

¹Communicated by Mr J. N. B. Hewitt.

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